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# THE CANADA MEDICAL RECORD.

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## *Society Proceedings.*

### MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

*Stated Meeting, May 25th, 1883.*

R. A. KENNEDY, M.D., PRESIDENT, IN THE CHAIR.

The following resolution was passed:—

*Resolved*,—That this Society has heard with deep regret of the death of Dr. W. E. Scott, one of its oldest and most respected members,—a prominent member of the medical profession, a representative governor of the Province for many years, a well-known and successful teacher, as well as an energetic surgeon and practitioner, and feels sure that his loss will be widely felt and much deplored.

*Resolved*,—That this Society extends its deepest sympathy to Mrs. Scott and her family in their affliction, and that a copy of these resolutions be sent to Mrs. Scott and to the press.

DR. OSLER exhibited an *Aneurism of the Anterior Cerebral Artery*. There was meningeal hæmorrhage about longitudinal fissure, and at the base. On separating the median surfaces of the hemispheres, and clearing the blood away, a small nodular projection was seen on the right side just about the middle of the convolution of the corpus callosum. On further dissection this proved to be a small aneurismal sac, on a branch of the anterior cerebral. It was embedded in the sulcus between the gyrus fornicatus and precuneus, and the substance about it was lacerated.

The rupture was at the edge of the sac, and of considerable size. In the white matter, half an inch beyond the aneurism, there was a round, well defined spot of hæmorrhage, the size of a cherry. Dr. Bell said the above was removed from a boy six years of age, who had been brought to hospital in an unconscious condition; with feeble pulse, pale face, eyes and head turned to right and left hemiplegia,—he remained so till death, six hours later; no wound was found. Some time before he had been run over by a baker's cart, which left him halt in his left leg. Three weeks before his last accident he had fallen from a hay loft. Nothing followed this but drowsiness for a short time.

*Uterine Fibroid Polypus*.—DR. GARDNER showed this specimen which he had removed from the posterior surface of the uterine wall close to the inner os. Very slight hæmorrhage followed, which was easily stopped by tr. iodine. Dr. G. T. Ross, whose patient the woman was, gave the following particulars: Mrs L. had been married ten years, no children; had good health till two years ago, when she began to suffer from dysmenorrhœa. Had also more or less pain throughout pelvis, and radiating down right thigh. About six months ago menorrhagia set in, and more recently the flow became continuous, alternating occasionally with a watery discharge from uterus. She became markedly anæmic, and complained of uterine tenesmus. An examination revealed the above tumor projecting from the os.

DR. RODDICK exhibited a photograph and cast of a case of extremely varicose condition of the veins of the leg operated on successfully by Dr. Malloch, of Hamilton, by excising portions of the affected veins, and by carbolic injection.

DR. KENNEDY shewed photographs of Barnum's alligator-skinned child, at the birth of which Dr. Kennedy attended the mother. He said it was an ordinary labor, but the baby's skin was as if varnished, but presented no cracks or creases, and the child could not open its eyes; he ordered it to be rubbed with Cod Liver Oil. Dr. Kennedy lost sight of his patient, as the parents soon after left the city. Dr. Fox, of New York, seeing such a beautiful specimen of Ichthyosis at Barnum's Show, wrote to Dr. Kennedy for information about the history of the case.

*Lawson Tait's Operation.*—DR. GARDNER exhibited a set of uterine appendages (ovaries and Fallopian tubes) which he had removed a week previously. The ovaries were somewhat enlarged, and contained several cysts, one of them being three-quarters of an inch in diameter. The Fallopian tubes were slightly distended with a catarrhal secretion.

The patient was a charwoman, æt. 36, unmarried, never pregnant. Began to menstruate at 17; flow always copious, with clots, and attended with hypogastric pain. Otherwise she had fair health till a few years ago, when, after reaching overhead to wash a ceiling, she suffered increase of pelvic and lumbar pain, with "painful sitting" and aggravation of the dysmenorrhœa and menorrhagia. When patient first came for advice menses had continued for a month. Examination revealed a small, circular os uteri, with a bulky, completely retroverted uterus, measuring 3½ inches. The channel was tortuous. Marked tenderness around uterus, with thickening felt in posterior cul de sac. After dilatation with a small laminaria tent, a fibro-cellular polypus of the size of a cherry was discovered hanging through the internal os, attached by a pedicle further up. This was removed, and the curette then passed over the whole endometrium, bringing away a quantity of soft granulation-like tissue. Immediately afterwards the endometrium was swabbed over with Churchill's tinc. of iodine. The uterus was then replaced, and an Albert Smith pessary introduced. Hot vaginal douches were prescribed and rest in bed enjoined. No relief followed. The next two periods were profuse, with

clots and pieces of membrane, found by microscopical examination to be the uterine lining membrane. She was then treated for some weeks by careful tamponing of the vagina with cotton soaked in glycerine, with iodoform. This gave temporary relief, but menstruation continued to be excessively painful, and attended with vomiting and great general prostration. Oophorectomy was proposed as a *dernier ressort*. The patient eagerly grasped at the idea of any expedient that gave a prospect of relief; so, on the 18th of May, nine days after the cessation of menstruation, the operation was done. No difficulties were encountered. The ovaries and tubes were not adherent. They were easily raised between the edges of the abdominal wound, ligatured, and cut away. A good deal of abdominal pain and incessant vomiting were suffered for a few days. Temperature in the vagina never rose over 102° F. The patient was kept profoundly under the influence of opium (Battley's solution) given hypodermically, and nourished exclusively per rectum for a week. Only small pieces of ice given by the mouth. The menses, or a metrostaxis of blood of dark cherry-red color, appeared on the second day, lasting four or five days. The abdominal incision united perfectly. After the first week, recovery, though slow, was steady. The patient, who had been a terrible sufferer from indigestion, was much improved in this respect, as in many others. Defecation, which formerly was agonizing, now almost painless. Chloasma (uterine), formerly most marked, now disappearing fast. All the symptoms much mitigated.

*June 17th.*—A month since operation. Improvement in all symptoms. It is slow as regards pelvic pain. This symptom, depending as it does on pelvic peritonitis, metritis and endometritis, cannot disappear entirely for some time to come.

DR. TRENHOLME said he was the first to perform this operation in Canada. His patient is now enjoying good health, and has not menstruated since. He believed the operation ought to be done oftener than it is.

DR. RODDICK asked if it were not possible to make the operation less serious, by merely ligating the Fallopian tubes between the uterus and ovaries, and then cutting them through, which operation could be done with a very small opening in abdomen.

DR. GARDNER said no, for it might produce gangrene or septic peritonitis, and often the ovaries are in a bed of inflammatory exudation.

DR. TRENHOLME said the operation might be performed through the vagina if there were no adhesions.

DR. OSLER was surprised to find that ovaries so slightly diseased required such heroic treatment.

DR. GARDNER said the operation was indicated even if the ovaries were healthy, for you remove the organs which are the cause of all the monthly symptoms. His case was not ovarian, but uterine dysmenorrhœa.

DR. F. J. SHEPHERD read the following paper on *Two Cases of Wound of the Palmar Arch*: Perhaps there are no more troublesome cases to treat, or ones that give rise to greater anxiety, than wounds of the palmar arch. If treated properly, as a rule, these cases terminate favorably, but even with the most skillful treatment serious results sometimes follow. It seems extraordinary how often wounds of the palmar arch are badly treated, when every text book in general and minor surgery gives such definite directions as to what should be done. But a case is brought to the surgeon where there is a small wound in the ball of the thumb which has bled freely at first, but now the hæmorrhage is arrested, and he probably merely applies dressing, with perhaps a small compress, and sends the patient away; in a day or two when the clot breaks down, profuse hæmorrhage comes on (possibly at night), and before a surgeon can be found the patient has lost a great deal of blood. Now a compress may not arrest the bleeding, and the brachial artery may have to be tied to save life, or the forearm may in worst cases have to be amputated. These serious results would not have happened had the surgeon in the first instance enlarged and thoroughly cleansed the wound, plugged it from the bottom with lint, placed a compress in the palm of the hand, and bandaged the whole firmly and evenly, and then left alone for three or four days. Very often the wound is plugged, and a compress and bandage applied; but the anxiety or overofficialness of the surgeon prompts him to examine the wound daily, to see that everything is all right. This disturbs the parts and oozing commences, which cannot be arrested by the most careful pressure, and in consequence the serious operation of tying the brachial has to be resorted to. The truth of the old axiom that "meddlesome surgery

is bad surgery," cannot be too often insisted on. When the wound is once plugged and properly bandaged, it should be left undisturbed for at least three or four days, if the pain or discomfort is great, morphia should be administered to allay it; but on no account should the wound be disturbed. In exceptional instances the plug causes a gangrenous condition of the wound, or a diffuse cellulitis is developed, and the surgeon may have to resort to amputation to save life. I shall now relate two cases which came under my observation during the past year, and which fortunately terminated favorably, though at the time they caused me much anxiety.

CASE I.—J. S., aged 15, while washing bottles fell with one in his hand. The bottle broke, and cut him severely in the ball of the left thumb, a little to the ulnar side and parallel to the first metacarpal bone. There was considerable hæmorrhage at the time, which was controlled by a tight bandage round the arm. In this condition he was brought to one of the hospitals; as there was no hæmorrhage from the wound, it was not explored, but a couple of stitches were put in and the wound was dressed with dry absorbent cotton, kept in position by a light bandage. The boy was then sent home. This happened on Tuesday, March 7th, 1882. The dry dressing was left on till Saturday, the 11th, when, as the wound was suppurating, it was removed and replaced by water dressing. On Saturday night profuse hæmorrhage suddenly set in from the wound. The boy was brought to the General Hospital as quickly as possible, and one of the house staff controlled the hæmorrhage (temporarily) by means of a cork compress and tight bandage. On Sunday evening there was slight oozing, but very little blood was lost till next morning, Thursday 13th, when the hæmorrhage became again profuse. I saw him now for the first time. The bleeding was controlled by an Esmarch bandage, and the wound was examined. It was found to extend through the ball of the thumb down to the bases of the metacarpal bones of the thumb and forefinger, which could be felt quite bare. On cleansing the wound and loosening the Esmarch, no bleeding point could be discovered, as the tissues were much infiltrated with effused blood, which also welled up from the bottom of the wound. The Esmarch having been again applied the wound was thoroughly cleansed, and plugged from the bottom with a firm cone of absorbent cotton, soaked in carbolic oil (1-16), over

which was placed some lint folded square and dry absorbent cotton. The whole was kept in position by a short flat stick, placed across the palm and held firm by a figure eight bandage going round the two ends of the stick, and over the back of the hand. By this means good counter pressure was effected. The hand was now closed on the palmar pad and stick and bandaged firmly; the bandage was continued to near the elbow (which was flexed) and then carried round the forearm and arm, so that the elbow was fixed in a position of extreme flexion. The boy was sent home to bed, and a quarter of a grain of morphia was prescribed. The hand was left in this position for four days, during which time the boy's temperature kept at about  $100\frac{1}{2}^{\circ}$  F. There was considerable pain of a throbbing character, but a quarter of a grain of morphia at night always procured sleep. The bowels were kept open with calomel; at the end of the fourth day, an Esmarch having been applied to the forearm, the wound was examined, and the plug of cotton wool removed. It came away quite easily and was bathed in a healthy pus; the bottom of the wound was granulating freely. The skin in the neighborhood was perfectly healthy, with the exception of a small spot on the inner edge, from which a slough came away in a day or two. As there was much pus between the first and second metacarpal bones, and the only tissue at that point between bottom of the wound and the back of the hand was a thin skin, an incision was made through it, and a short drainage tube introduced. On loosening the Esmarch no hemorrhage took place. The large hole into which the wound was now converted was filled with absorbent cotton soaked in carbolic oil, and the hand was placed between two splints, well padded with absorbent cotton (dry), and carefully and firmly bandaged, and slung across the chest. That night the boy slept well without an opiate, and the case thenceforward progressed most favorably, the large cavity taking, of course, some time to fill up, which it did from the sides principally. After the first dressing, cotton wool saturated with iodoform was substituted for the carbolic oil dressing, and had the remarkable effect of almost preventing suppuration. By April 7th the wound was completely healed. When last seen the boy had only a little stiffness of the thumb. The cicatrix was not very noticeable.

CASE II.—E. C., butcher, aged 58, whilst sawing a meat-bone, accidentally cut his left thumb with the saw, on the back of joint, between 1st and 2nd

phalanges. He paid little attention to the wound, and merely kept it tied up with a piece of rag, but after seven or eight days the wound began to inflame, and poultices were applied. I saw him for the first time two weeks after the receipt of the injury (Sept. 12th, '82). At that time the whole hand was œdematous, the thumb greatly enlarged, boggy to the feel, and covered with an erysipelatous blush. The wound was discharging a stinking pus. Temperature  $102^{\circ}$  F.; pulse 104. On examining further, it was found that the pus had burrowed up in the inner side of the thumb as far as the middle of the metacarpal bone. Two deep incisions were made, the one in the inner side of the first phalanx and the other on the back of the metacarpal bone, and a large quantity of pus was evacuated. The cavity was washed out with a 1 to 20 solution of boroglyceride and a drainage tube was put through the two incisions from the upper to the lower, and the thumb was dressed with lint soaked in boroglyceride; a well padded splint was placed on the palmar surface of the hand, and the whole evenly and firmly bandaged with a gauze bandage. On re-dressing the hand two days after this (Sept. 14) and withdrawing the tube, a free bleeding took place, the bleeding point not being found on enlarging the wound. It was plugged with cotton soaked in boroglyceride and glycerine, equal parts; over this a pad of boracic lint was placed, and the whole firmly bandaged to a pasteboard splint. By this means the hemorrhage was completely controlled. On removing the dressing three days after, the plug came away easily, and was bathed in healthy, sweet pus. No hemorrhage occurred. The hand looked much better, was reduced in size, and no erysipelatous blush was present. Temperature and pulse normal. Wound dressed as before with boroglyceride solution. The dressing was changed every third day, and all went well for more than a week, when suddenly an alarming hemorrhage occurred whilst he was straining at stool. The loss of blood was so great that he fainted. The friends partially arrested the hemorrhage by tying a silk handkerchief around the wrist. I was immediately sent for, and on arriving at the house I put on an Esmarch bandage and examined the wound. I again enlarged it, and cleaned it of clots, but on loosening the bandage, could not detect the bleeding point. The blood seemed to well up from the bottom of the wound, which extended the whole length of first phalanx. I reapplied the Esmarch, cleaned

the wound of clots, and plugged it firmly from the bottom with lint soaked in equal parts of boroglyceride and glycerine, and bound the hand and thumb firmly on a splint, well packed with boracic cotton. I also put a compress over the radial artery, near the wrist, and kept the hand against opposite shoulder. The dressings were left on for four days, at the end of which time the patient had a severe rigor, followed by a temperature of 104° F. I then removed the dressings and let out about an ounce of perfectly sweet pus. The wound was redressed with boroglyceride, and covered with a pad of boracic cotton, the splint reapplied, and the whole kept in place by a firmly and evenly applied gauze bandage. No hemorrhage occurred after removal of the Esmarch, which was applied during the dressing; and from this time forward the case progressed favorably, the wound granulating from the bottom.

No doubt, in this case, the drainage tube ulcerated through either the princeps pollicis artery or a branch from the radial, which so often passes over the web of the thumb to complete the superficial arch, and which is also connected with the deep arch by a short trunk. Fortunately, by the thorough drainage the cellulitis had been controlled before the severe hemorrhage came on. The second hemorrhage was due no doubt to the displacement of the clot by the straining at stool.

*Testis in perinæo*.—DR. R. L. MACDONNELL related the case. The patient is 15 years old. The left testicle has rested in the perinæum from the time of his birth. It is situated slightly to the left of the ano-scrotal raphe, rather nearer the anus than the scrotum. The organ is well developed, and freely movable. It can be put into its proper place, but cannot be retained there. The scrotum is not so well developed on the left side as upon the right. There is left inguinal congenital hernia. The boy has been under observation for the last five years. He is said to have been born prematurely at the sixth month, and up to the present time has been very delicate, but the deformity has, as yet, caused him no inconvenience.

*Nitro-Glycerine in Epilepsy*.—DR. F. W. CAMPBELL spoke of the good effects of a one per cent. solution of nitro-glycerine in two cases of epilepsy. The first was a young woman who used to have an attack every four or five weeks; occasionally would be free for about two months.

Gave her one drop three times a day, since which time (Dec. 16) has not had a single attack. The second case was a man whose attacks varied in frequency from three or four a day to one in two or three weeks. Three months ago put him on one drop doses three times a day. He has not had an attack since.

DR. HENRY HOWARD asked if these were cases of pure epilepsy, because the nitro-glycerine treatment has not proved to be of much use in true epilepsy—that is, where there is loss of memory and micturition during the seizure.

DR. CAMPBELL did not know if his patients micturated, but believed they were true epileptics.

DR. HENRY HOWARD said that according to modern alienists, loss of memory and micturition must be present else it is not true epilepsy, and the treatment of most use in these cases is tying the internal carotid. This is useless in the pseudo cases.

DR. KENNEDY mentioned having had good success in one case of epilepsy with 10-grain doses of borax three times a day.

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## *Progress of Medical Science*

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### THE FREQUENT REPETITION OF DOSES.

A lecture delivered at the Bellevue Hospital Medical College, by A. A. Smith, M.D., and published in the *Medical Record*.

GENTLEMEN:—I propose to direct your attention this morning to the subject referred to at my last lecture, namely, the frequent repetition of doses. This subject is a very important one, and one regarding which it is very difficult to establish any arbitrary rules. In the case of chronic diseases, where it is necessary to continue the treatment for a long time, the plan of administering the medicine in larger doses at intervals of five or six hours is probably the best one which can be adopted. For example, if you were prescribing some preparation of iron in a case of anæmia, it would be unnecessary to give it oftener than three times daily. Again, in certain cases it may be desirable to produce the full effect of the drug at a single dose, as in the administration of a cathartic, or of quinine to reduce temperature.

In other cases, however, it is desired, in administering medicinal remedies, to keep up their continued effect, and the question arises, whether we can accomplish this purpose better by giving them in smaller doses at frequent intervals than by giving them in large doses at much longer intervals, the total amount of the drug in the end

being, perhaps, the same in either case. It is a fact with which you are acquainted that certain drugs become absorbed and produce their effect upon the system in a very short time, and they may also be eliminated very rapidly, while others act slowly, and are eliminated after a longer interval.

It is not my intention this morning to deliver a scientific lecture; I shall make certain treatments based upon clinical facts for which I shall not attempt to give any explanation.

The first drug to which I would call attention in connection with the subject of the lecture is the chlorate of potash. It may not be unknown to most of you that this drug has at times been administered in sufficiently large doses to produce a dangerous inflammation of the kidneys. Special attention has been called to this fact by Dr. Jacobi of this city, and also by other authors. This danger can be avoided by administering the drug in small doses frequently repeated. In writing the prescription, a teaspoonful of the solution may be made to represent as much of the drug as you wish to give; or, if it be in a more concentrated form, the patient may add water to it. Grain doses given every half-hour in scarlet fever, diphtheria, tonsillitis, etc., will produce the same results as larger doses, without the danger of the evil effects resulting from the accumulation of the drug in the system, as sometimes happens when it is administered in the ordinary way. Indeed, I believe they will produce better results upon the throat inflammations.

For the treatment of neuralgia, croton chloral has for a long time been given in large doses, as from five to eight grains, repeated every two hours, until fifteen grains are taken. But allow me to suggest what I consider a better mode of administering the drug—that is, to give a grain of it, prepared as you please, either in liquid or pill form every half-hour until the neuralgic symptoms are relieved. A solution of which a teaspoonful represents a grain of the croton chloral may be made, having scarcely any of the bad taste which usually belongs to this medicine when given in large doses. I may here remark that one of the important advantages connected with the frequent repetition of doses is the fact that the medicine may be so largely diluted with water or other vehicle as to be rendered comparatively tasteless, and harmless to the mucous membrane of the stomach.

You will often be called upon to treat very obstinate cases of urticaria, and you will be put to your wits' end to know what to do. The plan ordinarily suggested is to give alkalis, as the bicarbonate of sodium, or magnesium; but, if you will give the patient two grains of the salicylate of sodium every hour or half-hour, you will usually be enabled to effect a cure even in obstinate cases, except those of a chronic nature. Two grains of the salicylate of sodium administered in a teaspoonful of water is almost tasteless, and may be given without producing disturbance of digestion.

Urticaria is often caused by the administration of full doses of balsam of copaiba in cases of urethritis, or inflammation of other mucous membranes, and it may seem strange to you when I make the statement that a single drop of the same drug given every half-hour will sometimes control urticaria. I have no explanation to offer, but I make the statement not alone upon the authority of others; I myself have observed the efficacy of the treatment, although not so frequently as in the treatment by the salicylate of sodium.

Fowler's solution, or the liquor potassii arsenitis, half a drop given every half-hour for six or eight doses, will often relieve the vomiting which occurs after a debauch. It will also relieve the morning vomiting of drunkards, and is of decided benefit in the sympathetic nausea and vomiting of pregnancy.

Jaborandi has been given in large doses with a view to exciting perspiration in cases of Bright's disease, but the very serious objection has been found to its administration in this manner, that it sometimes has a very depressing effect upon the heart's action, resulting in some cases fatally. Now, five to ten minim doses of the fluid extract of jaborandi given every hour or half-hour will produce marked perspiration without causing any unpleasant effects upon the heart. I sometimes combine with the jaborandi the tincture of digitalis, with a view to counteract any possible influence which the former drug may have upon the heart. So dangerous do I consider large doses of jaborandi that I often hesitate long before administering it, especially in the uræmia of the puerperal state.

You will please remember that the amount of the medicine administered is not so small as you may at first suppose, especially if you take into consideration their strength and the frequency of their repetition.

The next preparation of which I shall speak is a solution of the sulphate of atropine, one one-hundredth of a grain in a goblet of water, a teaspoonful of which shall constitute a dose, amounting in all to about sixty doses. Now, you will often be called to see cases of supposed croup, but which, in the majority of instances, prove to be cases of false croup of a reflex origin. Ordinarily, you will be able to relieve these patients by giving them a teaspoonful of this preparation every hour. It is possible the remedy acts slightly as a stimulant of the respiratory centre; it is also possible that it has some influence upon muscular contraction or relaxation; at all events, clinical experience proves that it is of benefit in these cases. The dose may be repeated every hour or half-hour, according to the severity of the attack. If the child's face begins to flush and show signs of the physiological effects of the drug, the dose can be reduced in frequency. It should be remembered that when thus administered the equivalent of a full dose of the drug will soon be reached. Do not forget in these cases to give an emetic if there is anything

in the stomach which may be causing the spasm, or a cathartic if there be reason to suspect intestinal disturbance as the cause.

The bromides are largely used in the treatment of the nervous and febrile disturbances of children, but an objection to them is the fact that the little patients do not take them readily, because of the taste; the bromide of sodium is, perhaps, as little disagreeable as any of the preparations. This objection can be avoided by giving small doses frequently repeated; for instance, a few grains dissolved in half a tumblerful of water, a teaspoonful representing a half-grain, or a grain even, administered every ten or fifteen minutes. When given in this manner, the bromides often prove of great benefit in the nervous disturbances arising from dentition and other causes, and in relieving the fever which, in children, usually attends a slight degree of excitement of any kind. I have seen an elevation of the temperature in children where it could not be traced to any other cause than the excitement incident to their afternoon play. A temperature which might indicate a sickness of considerable gravity in the adult, if it occur in a child may be of comparatively little importance. In such cases the bromides, administered in small doses, say a grain or two at intervals of ten or fifteen minutes, will often prove of great benefit.

I began the use of some of these remedies administered in this manner on the recommendation of others, and I must say in a somewhat skeptical frame of mind, thinking that the effect which they produced was probably due to the moral influence upon the patient, or that it had no foundation in fact, it being a mere coincidence that the drugs were administered at a time when the patients would have recovered in the absence of any treatment; but, having seen any benefit follow their administration repeatedly, I concluded they must have a wider range of usefulness, and began to use them much more frequently.

You will often meet with children of a nervous, excitable frame of mind, who are, perhaps, naturally of a sensitive, nervous temperature, who are disturbed by the slightest noise, and are unable to go to sleep before ten or eleven o'clock at night. In such cases you will find it necessary to give a nervous sedative. An excellent effect will be produced by chamomilla in some one of its forms, as the tincture, administered in minim doses, every fifteen or twenty minutes. It is tonic as well as sedative. It is a better sedative in such cases than the hydrate of chloral, which is liable to affect the digestion. It is harmless when given in large doses. Put a teaspoonful into a half-tumblerful of water, and let the child drink it freely.

One of the most important remedies which can be administered with great benefit in frequently repeated doses is ipecac. You are aware that a teaspoonful of the syrup of ipecac is likely to produce emesis; but it is also a fact, regarding which I was at first quite skeptical, that a single drop of the wine of ipecac will often arrest obstinate

vomiting. It should be repeated every ten or fifteen minutes. When administered in this manner, I have often known it to relieve vomiting from different causes, among which are pregnancy and subacute gastritis. Children often vomit from very slight causes, and are liable to suffer from diarrhoea and vomiting which have no other assignable cause than disturbance of digestion. A single drop of the wine of ipecac, repeated every fifteen or twenty minutes, will often produce the most marked relief, both from the vomiting and the diarrhoea. Administered in this manner, the drug is not nauseous, and is easily taken.

I now make a statement, upon the authority of Trousseau and his enthusiastic successor, which may appear to you, as it once did to me, incredible—viz., that one-sixtieth of a grain of calomel taken every hour for ten or twelve hours will relieve the headache of syphilis occurring at night. I have administered it in one-fortieth-grain doses in this manner, and have obtained the results which they claim for it, but I have not yet tried it in sixtieth-grain doses. The relief was very marked by the second or third night. It is not intended to take the place of iodides which are given in such cases. Doubtless the calomel, when administered in such small doses, is all taken up into the system.

Nursing children often vomit or regurgitate their food; this has been relieved repeatedly in my experience by giving them a tablespoonful of a solution of one grain of calomel to the pint of water every ten or fifteen minutes. In order to dissolve it, the calomel should first be put into an ounce of lime-water, and then into the pint of pure water. One twenty-fourth of a grain of mercury with chalk, administered every fifteen or twenty minutes, is often of great benefit in the vomiting and non-inflammatory diarrhoea of children. Where the diarrhoea is accompanied by mucous passages, indicative of a certain degree of inflammatory action, or enteritis, benefit will be derived from the administration of one teaspoonful of a solution of bichloride of mercury (corrosive sublimate), one grain to the quart, every hour. The dose may seem very small, but it must be remembered that the dose for an adult is only one-sixtieth to one thirtieth of a grain, and, when administered in this manner, the full dose for a child is reached within a few hours.

Another extraordinary statement, which at first seemed to me to be fabulous, and may seem so to you, but which nevertheless, you will find to be based upon clinical facts: Put a grain of tartar emetic into one quart of water; teaspoonful doses of this solution every half-hour will prove effectual for the relief of the wheezing and cough accompanying a slight bronchitis in children.

A single drop of the tincture of nux vomica given every ten minutes will often produce most marked relief in sick headache not of a neurotic origin. It should be given immediately after or soon after meals.



It is well-known that cantharides, when given in large doses, is liable to cause inflammation of the urinary tract; but it has been found that a single drop of the tincture every hour will in many cases relieve vesical catarrh.

You probably have heard that digitalis has been used in cardiac disease. Certainly if you have not heard of it you will, and, if you have already heard of it, you will hear of it again, particularly at the clinics. Ordinarily, it is administered in considerable doses only three or four times a day; but I do not hesitate to say that the frequent repetition of small doses will produce much more benefit than larger doses at longer intervals. A single drop of the tincture of digitalis, given to a patient suffering from symptoms due to organic heart disease when digitalis is indicated, administered at intervals of an hour or half-hour, according to the severity of the symptoms, will often give greater relief than larger doses, and without liability to ill effects.

For the diarrhoea of children, accompanied with slight inflammation, straining, and the passage of jelly-looking matter, but not true dysentery, five drops of castor-oil, given every hour in water with sugar and gum, is an excellent remedy.

A gentleman in this city, of authority in the specialty of venereal diseases, says he has given greater relief in a short time, in cases of orchitis and epididymitis, by the administration of two-minim doses of the tincture of pulsatilla every hour than by any other mode of treatment. I can testify to the great benefit derived from the drug administered in this manner in dysmenorrhoea not of a membranous, obstructive, or neuralgic character.

One of the most distressing symptoms from which many women suffer at the menopause is flatulence, and a sensation of fluttering or palpitation at the pit of the stomach, an effectual remedy against which is the extract of calabar bean in one-fiftieth-grain doses, repeated every half-hour for six or eight doses. It may be repeated in the same way after stopping it for three hours.

In cases of amenorrhoea not dependent upon anæmia, benefit may be derived from minim doses of the fluid extract of ergot administered every half-hour for five or six hours the day before the flow should begin, and again on the day on which it should occur. Contradictory as it may seem, when administered in the same manner the fluid extract of ergot is of benefit in cases of excessive menstruation.

Aconite is one of the drugs to which you will probably have occasion to resort frequently when you enter upon the active practice of medicine. It has for a long time been used in quite small doses, but not so frequently repeated as it might

be with benefit. There are many cases of febrile-movement, with dry, hot skin, a full, bounding-pulse, the mucous membrane of the throat and nose probably dry—cases in which the febrile-movement is not the commencement of one of the continued fevers; the tincture of aconite, one-third to one-half a minim given every fifteen minutes will be found of decided benefit. Visiting the patient shortly after the commencement of this treatment you will often find him in a little perspiration; the medicine may then be administered at longer intervals, every half hour or longer, according to the indications. The tincture of aconite, administered in a similar manner, is also useful in cases of commencing so-called cold in the head. It is likewise useful in cardiac-hypertrophy with palpitation, severe headache, and disturbances of the nervous system due to increased force of the heart-beat.

Two minims of the tincture of hamamelis every half hour will often control hæmorrhages. I was at first inclined to look upon this statement with a great deal of distrust, but I have since tried it in cases of hæmorrhage from the nose, from the uterus, and in the hæmorrhage from hæmorrhoids, and have found it of great benefit.

The tincture of belladonna in minim doses, given every half-hour, is a good remedy in cases of nasal catarrh, and bronchitis accompanied by free secretion. You should cease to give the drug for a while after eight or ten doses have been administered, as it is less quickly eliminated from the system than the other medicines of which we have already spoken. In cases of pulmonary œdema with failure of heart power, belladonna thus administered is of benefit in retarding the exudation of serum, and in overcoming the failure of heart power.

Two grains of the chloride of ammonium, combined with ten or fifteen minims of the tincture of cubebs, given every half-hour, oftentimes controls acute pharyngitis and superficial inflammations of the other tissues about the throat. For inflammation of the throat dependent upon a gouty diathesis, add to this mixture ten minims of ammoniated tincture of guaiac, and administer every hour.

In the headache of migraine, one grain of the citrate of caffeine given every half-hour will often produce most marked relief.

In neuralgias about the face or head, three-minim doses of the tincture of gelsemium every half-hour will often act almost miraculously and leave no ill effects.

For certain kinds of headaches (especially those which are periodical and not of malarial origin), fifteen-minim doses of fluid extract of guarana given every fifteen minutes will very frequently relieve. If it does not relieve in four doses, increase the dose to thirty minims.

## THE TREATMENT OF FRACTURES IN BRITISH HOSPITALS.

There is, perhaps, no other province in the wide domain of surgery, in which similar and equally satisfactory results are so commonly brought about by a variety of means than in the treatment of simple fractures of the limb. And this is the case, not because any great diversity of opinion exists as to the end that is to be desired, for that cannot be alleged in this particular instance, but rather because the result sought for is in all cases identical, though capable of being accomplished by very many forms of treatment, which differ in this detail, and allow scope for the ingenuity and dexterity of the individual surgeon.

Fractures of the limbs are so common, that it is not a matter of surprise that we find at each institution some recognized method, which is sanctioned by custom and hallowed by time, for meeting all the more common forms of each injury, whilst any complication that may be found needs generally but a very slight modification of the apparatus. And this is rendered all the more necessary seeing that such injuries, except when complicated by some serious addition, such as severe injury to a joint or rupture of an artery, are treated in the first instance by the house surgeon, and the surgeon on his visit is rarely called upon to do more than approve, or at most to suggest some slight alteration in the apparatus.

Except there be some other injury, or on account of the feebleness of the patient, or in the event of some serious complication to a joint or artery, cases of fractures of the upper extremity are usually treated as out-patients, thus coming entirely under the care of the house surgeon and his dressers, and this renders it necessary that a convenient and portable apparatus shall be applied to keep the ends of the injured bone in good apposition. It would be impossible to enumerate the many ways in which fracture of the clavicle is dealt with, or the many ingenious appliances which have been invented by surgeons and instrument makers; but speaking only of hospital practice, the result obtained by a simple bandage with or without a pad in the axilla, and applied so as to throw back the shoulder upon the injured side, to raise and keep steady the humerus, and to take off the weight of the arm, are as satisfactory as could be wished for. Sometimes the figure-of-eight bandage, with a sling for the arm, produces the desired effect, whilst in other cases where it is difficult to overcome the deformity, the surgeon must rely upon his skill in using and applying a bandage, with a pad secured in the axilla by a strap passing over the opposite shoulder.

Fractures of the scapula do not commonly occur without either severe bruising of the surrounding parts or some other more serious complication, of which fractured rib is by far the most frequent. When they do occur without any serious complication, the treatment consists only of a sling or

bandage to steady the arm and take off the weight of the limb, and this is all that can be done if the acromion or coracoid process be broken.

Before speaking of the mode of treating the long bones in detail, it may be well to mention some of the materials which are in use in London at the present time for securing the position of fractures, after the application of splints has been dispensed with, as these means are not uncommonly found available in the first instance, and can be applied in many instances where there is no bruising, and where only one of two bones is broken, as happens particularly in the case of a fracture of the fibula or radius. The principal of these are, the starch or glue bandage, the plaster-of-Paris bandage, and one made stiff with dextrine, gum and chalk, etc. A very useful material for this purpose has long been in use at St. George's Hospital, and can be applied in the first instance in treating fracture of the fibula without bruising, and is almost invariably employed to put up fractures of the thigh or leg as soon as union has taken place and the splints can be laid aside. A piece of ordinary stout mill-board is cut to about the size necessary to embrace the limb, it is then soaked in hot water, which renders it pliant, and is shaped roughly to the limb, the edges being torn carefully so as to form a bevelled margin. A piece of flannel is then placed round the limb, or a simple roller is applied, and then a bandage is neatly and firmly carried from the toes to a distance above the joints between which the fracture is situated, and closely embracing the mill-board. This, on drying, makes a very convenient apparatus, light and strong, and in order to increase its strength and to keep the bandage from becoming unravelled, a thick coating of clarified gum is pasted over the bandage. The starched bandage, which is in general use at University College, is applied in much the same manner, coarse paste-board soaked in starch being used, and the limb being surrounded by an even layer of cotton-wool before this is applied. This being elastic, avoids the danger of compression which might ensue when this treatment is followed, as it often is, in the case of recent fractures; and the apparatus has the advantage, when thus applied, that it can, if necessary, be split up by a strong pair of pliers, and its width curtailed, while its efficacy for support can be re-established by the application of tapes or a fresh bandage. With one of these forms of permanent apparatus it is almost invariably the custom to treat fractures after union has taken place, and in many instances where the displacement is not great and the extravasation slight, recent fractures are also treated in this way. In the case of the bones of the leg, a junk is sometimes slung in a "Salter's swing" and the limb placed in it for a few days, until all swelling and bruising have disappeared. A solution of silicate of potash is sometimes preferred to either of the above-named materials.

To return, then, to the consideration of the fractures of the various bones and the usual plans for their treatment. In London hospitals the general method adopted in cases of fracture of the shaft of the humerus is to put the arm up in four well-padded wooden splints, tied together by two pieces of bandage which are made to encircle them, one above and one below, and the forearm, being supported by a sling round the neck, gives sufficient extension to ensure a good position of the broken ends. The fingers and forearm may be left unbandaged, unless there is a tendency for these parts to become swollen, and this treatment is usually continued until union has taken place, but the plaster-of-Paris bandage can be applied as soon as all swelling has subsided. This form of treatment can be used in all cases of fracture of the shaft, except those of the condyles or of the lower end of the bone, for which a rectangular wooden splint is almost always resorted to, with or without three additional flat splints to encircle the humerus, the one arm of the right angle being placed along the front of the forearm, and the other along the anterior aspect of the humerus. Any immovable apparatus is disapproved of in this locality on account of the desirability of making early movement in the elbow-joint, which generally is more or less injured when the accident takes place, and is therefore liable to become stiff if passive motion is not commenced at an early stage.

The old plan of treatment of fracture of the olecranon was to put a long straight splint on the anterior aspect of the arm and thus keep it fully extended, whilst the fragments were brought as nearly as possible into apposition by a figure-of-eight bandage. But when, by the action of the triceps, the upper portion of the ulna was drawn a long way up the arm, this plan was not found to give very good results, which answered, however, sufficiently well when the fibrous covering of the bone beld sufficiently together to prevent any great separation of the parts. Accordingly, the plan which has been successfully carried out in the case of the patella has been tried for the ulna, and the parts brought closely together by a silver wire passed through holes drilled obliquely down from the surface of each fragment. Under the anti-septic system this mode of proceeding has been attended with remarkable success in the few cases which have been reported, but it remains to be seen whether it is capable of being more generally followed.

A couple of well-padded, straight, and flat wooden splints are generally all that is required to keep the bones of the forearm in position when fracture takes place in the shaft of one or both, but many plans are in use for correcting the deformity in the injury which goes by the name of "Colles' fracture." Some surgeons use these same splints, and by a turn of the bandage which keeps them in position, passed over the hand,

maintain it at an angle downward to the side of the ulna, and obtain satisfactory results. Another very useful apparatus, by which the deformity is more easily corrected, is that invented by Dr. Gordon, of Belfast, who denies that impaction of the broken ends of the radius is of common occurrence, and corrects the deformity "by traction on the hand or pressure on the fragments, placing the hand in the prone position, then applying to the anterior surface of the forearm a splint to which a wooden conical or triangular piece is so attached that the external border of the splint projects beyond it; and on the back of the forearm a straight splint more thickly padded over the wrist than over the forearm," the whole to be fixed by two straps of webbing, and not by bandage. A more convenient and less complicated method in common use is a pistol-shaped splint applied to the back of the hand, with or without a short straight splint to the front of the forearm, and not extending beyond the wrist; the two being kept in position by a bandage.

Passing to the lower limbs, and to the fractures which occur in the femur, the plan of treatment usually followed in London hospitals is by one of the two forms of long splint reaching from the axilla down to the foot, and applied with or without shorter splints surrounding the thigh. When these are applied the foot is fixed by bandages to the lower end of the splint, and to an iron foot-piece which runs out at right angles to it, the form of splint known by the name of the French surgeon Desaulx, and this is secured to the body by a band passing round the waist, and runs up on the outer side of the body to the axilla, having a fork cut in its upper extremity for the purpose of giving a secure *point d'appui* for the perineal band, as it is called, by which traction is made. On this band are threaded three short flat splints, the upper ends of which are cut obliquely so as to fit the line of the groin, and these, with the long splint, surround the whole thigh, and are kept in position by one or more pieces of webbing. The whole having been properly adjusted; traction is made by tightening the perineal band, which, by passing over the upper end of the long splint round the groin and behind the nates, causes extension of the whole limb, and brings the fractured surfaces into close and accurate apposition. The shorter splints are, however, very frequently dispensed with, and then extension is effected by means of a weight applied with strapping to the leg and passing over the end of the bed, where an apparatus is fixed with a rest, over which the cord attaching the weight of seven to nine pounds is passed; and to further the effect of extension the lower end of the bed is slightly raised by blocks, so that the weight of the body may act in a manner to extend from the opposite direction. A patient thus treated is usually kept in bed for from four to seven weeks, and then one of the forms of immovable apparatus

is generally applied, plaster-of-Paris being less frequently used in the case of the thigh on account of the great weight which a splint made with this material necessarily involves. With very young children the best results are often obtained by using a weight to the leg as above described, while, to secure the limb from movements during sleep, and to keep the fragments in good position, a sandbag is placed on either side of the thigh, and another laid across the seat of the fracture; and further to prevent the patient from slipping down, and so nullifying the influence of the weight, a band is passed behind the back, from which two loops pass over the shoulders, and this is tied beneath the bed or secured to its upper end. One of these forms of treatment suffices in almost all fractures of the thighbone, but there are some in which the broken ends cannot be kept in position by any such means, and this happens particularly when the break occurs a short way below the trochanters, and the upper fragment is drawn upward and inward by the action of the psoas. For these cases the most frequent apparatus used is Earle's bedstead, which allows the patient to lie flat on his back, but the foot being secured on the injured side to a footpiece, the knees are bent over the raised portion of the bed, which thus forms a double inclined plane, and traction is kept up by the weight of the body, the knee thus becoming practically a fixed point. Many other ingenious modes of effecting the same results have been invented and are occasionally used, but they are not in general use, and are only required in exceptional cases; such, for instance, are the methods of placing the limb in a wire support, without splints, and making extension by a weight attached to the foot and passing over a pulley, which is placed at some height and distance from the end of the bed, or the splint known by the name of "Thomas," which consists mainly of a couple of parallel iron rods united at both ends, the upper being secured round the pelvis, and the lower to the foot, whilst a bandage passes round the whole apparatus and gives support to the lower part of the limb.

The treatment of fracture of the patella varies in detail at almost every institution, but the main points are to reduce the effusion into the synovial membrane of the knee joint, by which the primary separation of the fragments is mainly produced and maintained, and then to bring the two surfaces as nearly as possible in apposition. The first object is attained by raising the limb to an angle with the trunk on pillows, junks, or other apparatus, and applying evaporating lotions to the joint, and the second, by the use of bandages applied in various fashions, strapping, to which is sometimes attached a weight, which passing over the foot is intended to drag down the upper fragment and to act counter to the retraction of the quadriceps extensor. Some surgeons still use Malgaigne's hooks, but they are objectionable on account of

the risk of inducing erysipelas. The operation of wiring together the fragments has already been alluded to, and has now been performed in a considerable number of instances, but the danger, even with the utmost aseptic precautions, is sufficient to deter surgeons from recommending the operation, especially when the accident occurs, as it most frequently does, in persons past the healthiest period of life, and also considering the very useful limb which is obtained by patients who are willing to submit to a prolonged course of treatment by simple means. Where the separation of fragments has taken place after fibrous union between the two ends of bone, the operation has been resorted to in several cases with more or less satisfactory results. Where splints are used for the treatment of fractures of the bones of the leg, those which bear the name of Cline are, perhaps, most frequently had recourse to. They consist of two pieces of light pine wood, roughly hollowed out and shaped to embrace the outer and inner surfaces of the calf, ankle and foot, a round hole being cut for the malleolus in each. These are padded with tow or cotton-wool, and are fixed to the foot by pads and bandages, whilst they are secured round the leg by two pieces of board webbing. Other surgeons prefer to support the back of the limb, and for this purpose use three flat deal splints to which a foot-piece is applied, and these are kept in position by webbing and strapping or bandages. Whatever form of splint is used, the custom is almost invariable of swinging or raising the limb, either by junks or by the use of "Salter's swing," which allows the patient to exercise more movement of the body without disturbing the injured extremity. In some cases where the swelling is not great, the limb is placed in plaster-of-Paris, by laying strips of blanket soaked in the plaster on either side of the leg, and bandaging with muslin into which the dry plaster has been rubbed, cotton-wool being used, or, as some prefer, a flannel bandage, to guard against the risk of subsequent swelling. For Pott's fracture, where ecchymosis forbid its immediate treatment by some immovable apparatus, the practice recommended by the Dublin surgeon is usually adopted, namely, to place a single flat wooden splint upon the inner side, with a thick pad over the inner malleolus, and to secure to this the foot below and the leg above by light bandage.

The same apparatus suffices in the treatment of compound as in simple fractures, the more so as the wound is almost invariably treated on anti-septic principles, more or less strictly carried out in the manner of Professor Lister. Some surgeons, however, still adhere to the use of "Assalini's fracture-box," a weighty and somewhat cumbrous machine, whilst others prefer MacIntyre's splint, which has the advantage of being more easily cleaned, and is thus less likely to become a medium of conveying or retaining the germs of contagious diseases.

### THE PRACTICAL IMPORTANCE OF ATTENTION TO MINUTE PHYSIOLOGICAL PRINCIPLES.

Dr. Andrew Clark, in a recent lecture before the Clinical Society of London, spoke thus of one of its shortcomings:

But of all the defects in the work of the society, the one which I consider to be at once the most important and the most inexplicable is the seemingly studied disregard, in the treatment of a patient's malady, of those minute conditions of his daily life, which practically make and unmake health; so that, special management being almost nothing, and special medication almost every thing, it would seem as if physiological principles were of no account in therapeutics. But a more critical study of disease will soon convince us that this inference is unsound and its application incorrect. Putting aside, for the moment, inherited affections and parasitic maladies of whatsoever sort, I shall assume that chronic disease, a state of parts and not a thing interposed between them, is the eventual outcome of continued violation, conscious or unconscious, of physiological laws as they exist for the race or as they are conditioned by the peculiarities of the individual organism. I shall further assume that those violations are not exceptional and gross, but daily and minute, and that their effects, infinitesimal from day to day, become invisible only after longer periods of time, and so escape recognition except by those who are trained to discern the casual connections of subtle things. And I shall furthermore assume that the organism in virtue of the inherent forces maintaining its solidarity tends to repair existing and to repulse threatened disorders, and that, when placed in favorable and liberated from unfavorable physiological conditions, this tendency issues and ends in successful action.

And now let us take for illustration a case of primitive uncomplicated gastric catarrh. Assuredly it does not come without a cause, and it is not introduced from without, but begotten within. It is, in fact, engendered out of a more or less prolonged and petty violation of the laws of stomach digestion, and it is maintained by conditions which, although apparently too trivial to be worthy of notice, are yet sufficient to hinder the formation of healthy peptones, and to traverse the reparative powers of the organism. What is ordinarily done in such a case? The patient is told in a vague sort of way to have a light and nourishing diet, to take daily exercise, to avoid anxiety and overwork, and to try bismuth and alkalies, with an occasional alterative aperient.

Now, speaking, if I may be permitted to do so, from my own experience, it is certain that in such a case management is of more moment than medicine; and that, without a rigid and even minute obedience to the physiological conditions of healthy digestion, the chances are small of a speedy and permanent recovery from the gastric catarrh.

But the instruction of "a light and nourishing diet" admits of the widest diversity of interpretation; and with the most loyal desire for literal obedience, the patient, according to his age, habits, and status in life, may be unwittingly guilty of doing the most conflicting and injurious. He may eat too often or too seldom; his food may be fresh or preserved, too highly seasoned or too insipid, too concentrated or too bulky. He may take too much liquid or too little, too often or too seldom, too hot or too cold, effervescent or still. And without a conscious, but yet real and great departure from the intention of his instructors, he may frequently refresh himself with cups of tea and coffee, and make glad his heart by incidental glasses of wine or of beer.

Now, there is a right way and a wrong way in the management of every such case; and although they lie so near each other, and are so much alike that the distinction between them is not easy of discernment, it is necessary that the distinction shall be made. For it is upon a correct giving, or not giving, minute attention to the physiological conditions affecting the quantity, quality, and character of the solid and liquid food, the times and circumstances of eating and drinking, the amount of exercise, work, and sleep, and the adequate discharge of the excrementitious functions, that our work will succeed or fail, that our case will turn for evil or for good, and that the patient will either recover his health or drift into permanent valetudinarianism. If time permitted, and the occasion would justify it, I could easily produce from the records of our common experience in every department of medicine illustrations the most various and conclusive of the peril of neglecting and the profit of following minute physiological considerations in the treatment of disease. On this occasion I shall content myself with one.

About eight years ago I was summoned to a consultation in South Kensington, where, in presence of the patient and his family, I met Dr. Andrew Stephen and Dr. Taylor: It appeared that the subject of our consultation, having been ill for many weeks and growing rapidly worse, had been brought from Wales to London for further advice, and that the advice given was opposed to the feelings and convictions of the patient and his friends. The family therefore refused, without the help of another opinion, to carry out the proposed treatment, and accordingly, with the acquiescence of the doctor, I was summoned to examine the patient, and to state my views, without previous consultation with my colleagues, but in their presence.

The patient, a tall, stout man of about sixty, with flushed face, suffused eyes, anxious countenance, and swollen legs, sat leaning forward in an arm-chair, partially undressed, breathing laboriously, and apparently in much distress. He complained of shortness of breath and palpitation, of

confused sensations in his head and occasional dizziness, of general weakness and of indescribable depression.

The patient had a loaded tongue, with fetid breath, and although troubled with nausea was able to take freely of food and drink. The abdomen was distended and the liver distinctly enlarged. There were frequent discharges of fetid gases from the bowels. The feces discharged twice or thrice daily, were dark, offensive, and unformed. The urine was scanty, pale, faintly acid, of density 1010, and slightly albuminous. The heart was large, flabby, murmurish, frequent, quick, and irregular in time and force. The pulse was small, thready, irregular, and beating over a hundred times in a minute. The legs were edematous, bluish, red, and cold. The cervical veins remained continuously distended. Both lungs were congested at their bases, and there was frequent cough, with frothy and sometimes sanguinolent expectoration. Nothing worthy of note was discovered in the nervous system.

Inquiring now as to the treatment which was being pursued, I was told that, in the opinion of all who knew him and of all the doctors, except the last who had been consulted about him, that the patient was a man of naturally delicate constitution, that he needed constant keeping up, and that his chances of life were in direct proportion to the amount of support that he could take. Accordingly he was taking food and wine every second hour, had iron, quinine, and strychnia three times daily, and, being increasingly thirsty, he drank milk and soda-water without much regard to frequency and amount. Questioned as to my opinion of the patient's malady, and urged by my colleagues to say exactly what I thought, I replied that he was a man with deteriorated but not seriously diseased tissues and organs, and that he was in peril of death, not so much from his malady as from the means used for its cure; that he was being poisoned by food and wine, that he was in the condition of a fire having more coals put upon it than it could burn, and that his chimneys being choked, he was in near danger of being suffocated with his own smoke.

My colleagues agreeing with this view of the case, and the patient, after much discussion and explanation, assenting, he was placed upon a precise and severe regimen. He was ordered to have four simple nursery sort of meals in the course of the day; to have an ounce of brandy, diluted with eight parts of water, at dinner and supper; to be restricted to two pints of liquid in the course of the twenty-four hours; to take nothing of any sort between meals; and, as soon as he was able, to move about the rooms in which he dwelt. In the way of drugs he was directed to take, for a week or longer, a grain of calomel at night, followed by a saline aperient on waking in the morning; and to have, twice or thrice daily, two hours after food, infusion of gentian with bicar-

bonate of potash, iodide of potassium, tincture of digitalis, and aromatic spirits of ammonia.

For the first three days he was no better for this treatment. It tried him severely through the restriction of his liquids, and, declaring himself worse for it, he threatened to discontinue it and to return to his former ways; but, on the fifth day, he began to improve, and then, his confidence being gained, there was no further difficulty in continuing the treatment, which, when digestion improved, was added to by the administration of reduced iron with meals.

At the end of three months the patient declared that he was well, and all that could be said against him was that he had a weakish heart, that he was breathless upon exertion, that he had rather inadequate kidneys, and that, to maintain his sense of well-being, he was compelled to live by rule. This rule was a midday dinner, with an ounce of brandy in half a pint of water; a moderate breakfast and tea, with eggs, or poultry, or fish; extreme moderation in the use of fluids; tepid sponging, warm clothing, gentle exercise, and early hours.

Within a year I heard of the patient being in fair health, and managing his iron works in Wales. What I have since heard of him from time to time is instructive. Occasionally losing his faith, or lacking strength to follow his rules, he returns to the freedom for which he longs, frequents society, dines late, rejoices again in his wine, and has his heart's desire. For a time all goes merrily and well, and he breaks sarcastic jokes over the heads of physicians. But, sooner or later, the urine diminishes in density and becomes albuminous; the heart loses its strength and regularity; the breathing is oppressed; the nights are sleepless; till at last, after much suffering, his obstinacy is conquered, and re-convinced and humbled and penitent he returns to his obedience, and again recovers his health.

Such cases are common enough; and my experience forbids me to doubt that, in fevers and inflammations, in hemorrhages and acute diseases of every sort, the issue of particular cases turns oftener than we are perhaps ready to admit upon an adequate understanding of the physiological principles applicable to the removal of the conditions imperiling life, and upon the resolution and patience, the minuteness and fidelity, with which they are enforced.

And such considerations are true and important, not only in diseases jeopardizing life, but also in common disorders which, although devoid of serious peril, invade our comfort, hinder our work, and dull our joys in life. I do not forget that, through hereditary influences and unsuitable but inevitable environments, many persons are doomed to be constantly ailing without being ever really ill; that their normal state is one of suffering; that no physiological readjustments and no specific medication can give to them the pleasant sense of

health; and that attempts to effect what is impossible only in greater sufferings or in disaster; but, making full allowance for such cases, there remain countless numbers who are willing and eager to make any and every sacrifice necessary to recovery, and who are left to continue in suffering because the physiological principles and compensations applicable to their relief are derided, disregarded, or denied.

### SOME FACTS ABOUT URINE.

By LECHMERE ANDERSON.

A knowledge of urine and its constituents—normal and abnormal—has, of late years, become so important a branch of the study of clinical medicine that a few points concerning it may be of help to the student.

*Its Characters.*—Healthy urine is a clear, amber-coloured fluid, transparent, with a peculiar odour, and a saltish taste, usually containing small clouds of mucus deposit.

*Its specific gravity*, obtained by the urinometer, is, in health, about 1020; water being taken as 1000. As a rule, the sp. gr. is in inverse proportion to the quantity of urine passed, but occasionally, we get a high sp. gr. with an excessive amount of urine, as in diabetes mellitus. In disease the sp. gr. may vary from 1,000 to 1,050; when we have it above 1,040, we may suspect diabetes mellitus.

*Its principal constituents* are, urea (400–500 grs. daily), uric acid, hippuric acid, kreatin, kreatinin, besides phosphates, sulphates, chlorides, in conjunction with lime, potash, soda, &c.

*To ascertain the amount of solids* contained in urine is very readily done by Christison's formula, the rule for which is, "Multiply the last two figures of the sp. gr. by 2.33, and you get the amount of solids per thousand, thus, taking the sp. gr. to be 1,026

2.33

60.58 parts per 1,000."

*The quantity* may vary from normal (50 ounces), to more than 200 ounces daily in disease, or it may be almost suppressed, or completely so, as in collapse and renal congestion.

*Its reaction* may vary; even in health we may have it alkaline, where alkalies have been taken in excess, and we have it alkaline in disease, as in certain forms of acid dyspepsia, &c.

*Its colour* may be altered owing to the presence of

(a) Blood. (b) Bile. (c) Sugar.

*Deposits in urine* may be—

(a) Mucus, which may contain epithelium, either from bladder, kidney or vagina, spermatozoa, &c.

(b) Urates, either of potash, soda, lime, or ammonium; they are reddish or purplish in colour, and disappear when the urine is heated.

(c) Uric acid may be seen as little grains resembling those of Cayenne pepper.

(d) Oxalate of lime are seen as bright refractile particles floating in the urine, they therefore can hardly be called a deposit.

(e) Phosphates, which may either be amorphous phosphates, phosphate of lime, or ammonia phosphate of magnesium; the deposit is of a greyish-white colour, and the urine is alkaline.

(f) Pus, as a yellowish-white deposit.

*Tests:—*

(a) For mucus, add liquor potassæ, and it becomesropy on boiling.

(b) For urates—

(1) The colour is characteristic.

(2) They disappear on boiling.

(3) And when water is added to excess, or

(4) Upon the addition of an alkali

(5) By the microscope.

(c) For uric acid, by the microscope.

(d) For oxalate of lime, ditto.

(e) For phosphates—they do not disappear upon boiling; but a drop of nitric acid at once clears up the urine.

(f) For chlorides—add nitrate of silver and a white precipitate is formed, insoluble in nitric acid, but soluble in ammonia.

*Abnormal constituents:—*

(a) Albumen.

(d) Bile.

(b) Sugar.

(e) Pus.

(c) Blood.

(f) Casts.

*Tests:—*

(a) For albumen—

(1) See that urine is acid, if not add a few drops of acetic acid, heat, and the albumen is precipitated.

(2) Cold nitric acid test—add urine to nitric acid in a test tube, by gently pouring it down the side, and a line of precipitated albumen is formed between the two fluids.

(3) On addition of a drop of urine to some picric acid you get a turbidity produced.

(4) Add a small quantity of metaphosphoric acid to urine, and you have a turbidity produced even when the albumen is present in very minute quantities.

(b) For Sugar—

(1) Moore's Test.—Add to the urine half its volume of caustic potash solution and boil, when, if sugar be present, the colour of the urine will change to a dark sherry, add

(2) To this a few drops of Fehling's solution, sufficient to make the mixture blue, boil the upper stratum, and it will pass from blue to yellow and brick red.

N.B.—Fehling's solution contains:—

Cupric sulphate... 34.63 gram.

Sodium tartrate... 173

Caustic soda..... 500

Aqua..... 1 litre



As Fehling's solution is apt to decompose if kept long, it should be tested first by boiling alone.

(3) Trommer's Test.—Add a dilute solution of sulphate of copper to the urine, until it produces a pale blue tint, then add caustic potash, when a flaky precipitate appears, which disappears on adding more caustic potash.

(4) Fermentation Test.—Add some yeast to the urine, and allow it to stand for some time in a warm place, when fermentation occurs if sugar be present, and carbonic acid gas is given off.

(c) For blood—

(1) By the microscope.

(2) Dip a piece of blotting paper in the urine and dry it, add a drop of the tincture of guaiacum to it, and some ethereal solution of peroxide of hydrogen, when a beautiful blue colour is almost immediately produced if blood be present.

N.B.—The peroxide of hydrogen may be obtained under the name of ozonised ether.

(d) For bile—

(1) For bile pigment, add a drop or two of nitric acid to a small quantity of urine on a white porcelain plate, when a play of colours may be noticed, passing through green, blue, violet, red, into a dirty yellow.

(2) For bile acids.—To some urine, in a test tube, add a small quantity of cane sugar or syrup, afterwards add some strong sulphuric acid slowly down the side of the tube, so that the two fluids shall not mix, a deep purple colour will be produced at their junction.

(e) For pus—

(1) By the microscope.

(2) If present in any quantity, it forms a yellowish white deposit which becomes rosy on addition of nitric acid.

—*London Student's Journal and Hospital Gazette.*

### INFUSION OF CHAMOMILE AS A REMEDY FOR INFANTILE DIARRHŒA.

Christopher Eliot, M.D., writes, in *The Practitioner* of December, 1882, that he now seldom employs any other remedy than infusion of chamomile (*Anthemis nobilis*) in infantile diarrhœa. It is especially useful for the diarrhœa occurring during dentition, when the stools are many in number, green or slimy, and streaked with blood. Pain or cramp especially indicate its use, and a few doses will quickly calm a fretful child. ℞ ss. to ℞ j. of the infusion may be given to a child under one year of age, or double that quantity to a child over that age, and it may be repeated thrice or oftener daily, according to the severity of the case.—*Med. Reporter.*

### THE TREATMENT OF SPERMATORRHEA.

BY DR. H. COUPLAND TAYLOR.

Obstinate cases of spermatorrhea and frequent nocturnal emissions constantly come under the care of the practitioner. Too frequently the medical man consulted simply tells the patient that if he breaks off the pernicious habit of masturbation, which has probably originated his malady, he will soon quickly recover. But, in fact, in most cases, the habit has already been abandoned before he comes to seek advice, and these cases do not get well for months or even years afterward, unless proper measures be taken. Knowing that he has eft off this bad habit, and that he nevertheless does not improve, his complaint being made light of by the regular practitioner, and being greatly depressed in mind, he seeks the advice of the quack, who is always ready to benefit by these cases. I will give an outline of the treatment I have followed, and which I have found most successful in several such cases. The treatment should be : (1.) Moral, (2) Hygienic, (3) Medicinal :

1. *Moral*—(a) The pernicious of habit of masturbation, which has probably been the origin of the complaint, must at once be discontinued, or no good can result from any treatment. (b) The thoughts should be directed from himself by his having regular work and exercise. (c) The anxiety of mind which ensues should be allayed as much as possible, and a happy state of mind instituted.

2. *Hygienic*—(a) The patient should have regular, but not excessive, mental employment, and bodily exercise in the form of walking, riding or outdoor sports and games. (b) Cold sponging of the genitals night and morning for some minutes, or as long as can comfortably be borne, is a most important agent in giving tone to the relaxed organs. (c) The patient should have a hard mattress, and as little and as light clothing as possible at night. Care should be taken not to lie on the back, which may be prevented by wearing a knotted towel over the spine, or by some other device. (d) No quantity of liquor should be taken before retiring to rest, and the bladder should be emptied the last thing.

3. *Medicinal*—A mixture containing tincture of perchloride of iron and tincture of nux vomica should be given twice or three times a day; also a pill containing a fourth or a third of a grain of extract of belladonna with three grains of camphor should be given at first every night, and then every other night, immediately before going to bed. If these lines of treatment be adhered to, the patient, whether suffering from real spermatorrhea or simply from frequently returning nocturnal emissions, will steadily improve, and the emissions will occur less and less frequently, till, in the course of a few weeks, or possibly months—for a malady of long-standing (as this usually is) is never cured immediately—they will cease altogether, or only occur at such intervals as may be deemed normal, and in which there is no harm whatever.—*British Med. Jour.*



## ANÆSTHETIC MIXTURES FOR SMALL OPERATIONS.

It is often desirable to apply locally some anæsthetic material to deaden the sensibility sufficiently for small operations. There are various expedients proposed for this purpose. We do not now refer to the use of ether spray, but to various liquids which may be applied directly, and the sense of pain so far obtunded as to permit incisions without experiencing any other sensation than a mere touch. The mixture of chloral and camphor is often useful. When equal parts of chloral and camphor are triturated together, a clear, somewhat viscid, transparent solution results. This solution has considerable resolvent power, and will take up a comparatively large proportion of morphia. Chloroform may also be added to it without precipitation of any proportion of the dissolved constituents, thus :

℞ Chloral,  
Camphor, aa 3 ij.  
Morphiæ sulph., 3 ss.  
Chloroform, 3 j. M.

This may be applied with a camel's hair brush over the area to be incised, allowed to dry, and re-applied as freely as may be necessary to render the part insensible to pain.

Amongst the anæsthetic mixtures for surgical purposes proposed by Prof. Redier, are solutions of camphor in ether and in chloroform. One drachm of camphor may be dissolved in two drachms of ether, or the same quantity of camphor in two drachms of chloroform. A useful anæsthetic mixture is prepared by the addition of crystallized acetic acid to chloroform, in the proportion of one part of the acid to twenty parts chloroform. These anæsthetic solutions are applied by the brush freely over the part of the seat of pain, or to be incised. In some instances it may be better to moisten a cloth or some cotton and allow it to remain for some time in contact with the part.

Pure carbolic acid has an anæsthetic effect when applied to the skin. This fact has been utilized to lessen the pain of incisions in the skin in small operative procedures.—*Phil. Med. News.*

## THE ACTION OF CHLORAL, OPIUM, AND BROMIDE OF POTASSIUM.

In an article in the *British Medical Journal*, embracing a recital of experimental investigations, Dr. Sidney Ringer and Dr. Harrington Sainsbury make the following important observations on certain well-known drugs, after discussing the physiological effects of the agents mentioned in the title of their paper: "Clinically, the dangers of bromide of potassium and of chloral have been recognized; and thus in our text-books we find the statements that the presence of grave adynamic symptoms contraindicate chloral and bromide of potassium. Opium, on the other hand, in such adyna micstates, frequently appears to lend actual

support. The results of definite experiment we find to accord with the results of clinical experience; and the value of the former lies in that they confirm, and by their definiteness must tend to enforce, the teachings of the latter. The choice of a drug is, however, no simple matter; an advantage here may be outbalanced by a disadvantage there; and practical men may object that they would gladly give opium, but that the disordered stomach, blunted appetite, inactive liver, and torpid intestines more than outweigh the advantages of opium administration. This clearly is a matter for consideration in the individual case under treatment; and the decision will have to be according as one or other element—asthenia, or derangement of the digestive, etc., powers—is most to be feared. These objections to opium on the one hand, and chloral and bromide of potassium on the other hand, raise the question as to whether, in very many cases, a drug, at present very extensively used, especially in America—viz., bromide of sodium—might not with advantage be substituted in their place. The salts of sodium generally contrast very markedly with those of potassium; for the chlorides, bromides, and iodides of these two metals, the lowest figure would represent the potassium as ten times as active as the sodium. These precise numbers refer to action on the ventricle of the frog's heart (see *Medico-Chirurgical Transactions*, vol. lxxv, concerning the action of the salts of potash, soda, and ammonia on the frog's heart), but on all hands the evidence is forthcoming that, while salts of potassium are very poisonous, those of sodium are very slightly so. One of the marked points of contrast between the two sets of salts is to be found in respect of inhibition; potassium salts inhibit the frog's ventricle strongly, sodium salts scarcely at all. Here, however, we are considering drugs as to their cardiac effect; and, in respect of this, sodium bromide would rank far ahead of bromide of potassium, chloral, or opium, as to innocuousness. The objections holding for opium would not apply here, for sodium salts are generally very little disturbing to the tissues. With these advantages the general verdict of clinical experience is to the efficacy of bromide of potassium; and, should this position be maintained, it is clear that bromide of sodium will be in very many cases the sedative above all others to be selected."—*N. Y. Medical Journal.*

## TREATMENT OF AGGRAVATED HYS-TERIA AND CERTAIN ALLIED FORMS OF NEUROSTHENIC DISEASE.

Dr. W. S. Playfair concludes an interesting and quite exhaustive article on this subject as follows:

The principal elements in the systematic treatment of these cases are—

1. The removal of the patient from unhealthy home influences, and placing her at absolute rest.

2. The production of muscular waste and the consequent possibility of assimilating food by what have been called "mechanical tonics;" viz.: prolonged movement and massage of the muscles by a trained shampooer, and muscular contractions produced by electricity.

3. Supplying the waste so produced by regular and excessive feeding, so that the whole system, and the nervous system in particular, shall be nourished in spite of the patient.

On each of these I shall offer one or two brief observations:

1. The removal of the patient from her home surroundings, and her complete isolation in lodgings, with only a nurse in attendance, is a matter of paramount importance. This is a point on which I am most anxious to lay stress, since it is the great crux to the patient and her friends; and constant appeals are made to modify this, which I look upon as an absolute *sine qua non*. I attribute much of the success which I have been fortunate enough to obtain in my cases to a rigid adherence to this rule. In almost every instance of failure in the hands of others, of which I have heard, some modification in this rule has been agreed to, in deference to the wishes of the friends; as, for example, treating the case in one room by herself in her own house, or in admitting the occasional visits of some relatives or friends. While, however, the patient is to be rigidly secluded, it is incumbent to secure the attendance of a judicious nurse, with sufficient intelligence and education to form an agreeable companion. To shut up a refined and intellectual woman for six weeks with a coarse-minded stupid nurse, can only lead to failure. I have had more difficulty in obtaining suitable nurses, sufficiently firm to ensure the directions being carried out, and yet not over-harsh and unsympathetic, than in any other part of the treatment. Whenever my case is not doing well, I instantly change the nurse—often with the happiest results. In addition to the isolation, the patient is put at once to bed, to secure absolute rest. In many cases she is already bed-ridden; in others there has been a weary protracted effort, and the complete repose is in itself a great gain and relief.

2. Under the second head comes systematic muscular movement, having for its object the production of tissue waste. This is administered by a trained rubber, and here again is a great practical difficulty. The so-called professional rubbers are, in my experience, worse than useless, and I have had to teach *de nova* a sufficient number of strong, muscular young women; and the aptitude for the work I find to be very far from common, since a large proportion of those I have tried have turned out quite unsuited for it. I cannot attempt any description of this process. I need only say that it consists in systematic and thorough kneading and movements of the whole muscular system for about three hours daily, the result of which at first is to produce great fatigue, and subsequently

a pleasant sense of lassitude. Subsidiary to this is the use of the faradic current for about ten to twenty minutes, twice daily, by which all the muscles are thrown into strong contraction, and the cutaneous circulation is rendered excessively active. The two combined produce a large amount of muscular waste, which is supplied by excessive feeding; and in consequence of the increased assimilation and improved nutrition, we have the enormous gain in weight and size which one sees in these cases, it being quite a common thing for a patient to put on from one to two stones in weight in the course of five to six weeks. The feeding, at regular intervals, constitutes a large part of the nurse's work. At first from three to five ounces of milk are given every few hours; and for the first few days the patient is kept on an exclusive milk diet. By this means dyspeptic symptoms are relieved, and the patient is prepared for the assimilation of other food. This is added by degrees, *pari passo* with the production of muscular waste by massage, which is commenced on the third or fourth day. By about the tenth day the patient is shampooed for an hour and a half, twice daily, and by this time is always able to take an amount of food that would appear almost preposterous, did not one find by experience how perfectly it is assimilated, and how rapidly flesh is put on. It is the usual thing for patients to take, when full diet is reached, in addition to two quarts of milk daily, three full meals, viz.: breakfast, consisting of a plate of porridge and cream, fish or bacon, toast and tea, coffee and cocoa; a luncheon, at 1 P. M., of fish, cutlets or joints, and a sweet, such as stewed fruit and cream, or a milky pudding; dinner at 7 P. M., consisting of soup, fish, joints, and sweets; and, in addition, a cup of raw meat soup at 7 A. M. and 11 P. M. It is really very rare to find the slightest inconvenience result from this apparently enormous dietary. Should there be an occasional attack of dyspepsia, it is at once relieved by keeping the patient for four and twenty hours on milk alone.

Such is a brief outline of the method to which I am here to direct your attention. As to the results, I have already published several remarkable illustrative cases, so that it is perhaps not necessary to do much more in this direction. I may say, on looking back at my cases, that the only ones which I have had any reason to be disappointed are those in which the primary selection has been bad; and in the few in which the results were not thoroughly satisfactory, I had doubts as to their suitability for the treatment, which I expressed beforehand. These include one case of chronic ovarian disease, and one of bad anteflexion with fibroid enlargement of the uterus, in both of which the local disease prevented any really beneficial results. In a third I had to stop the treatment in a week, in consequence of cardiac mischief; two others were cases of positive mental disease; and in one case there was true epilepsy. I have no doubt that any positive co-existent organic disease:

of this kind should be considered a contraindication. In my other cases the results have been all that could be wished, and in many of them the patients have been restored to perfect health after having been helpless bed-ridden invalids for years; in one case twenty-three without ever putting a foot to the ground, in others sixteen, nine, six, and so on. In two instances my patients were in such a state that it was found absolutely impossible to move them except when anesthetized, and they were brought to London by the medical men long distances under chloroform, in each case leaving in six weeks perfectly cured.

### THE ORIGIN OF CREPITANT AND SUBCREPITANT RALES.

BY D. M. CAMMANN, M.D.,

Late attending physician to the New York dispensary, class of diseases of the heart and lungs.

It may, I think, be proved, by logical deductions from physiological facts, that crepitant and subcrepitant rales are not produced in the smaller bronchi and air-vesicles; and that they, as well as coarse or "mucous" rales, have their origin within the pleura, has been made evident by the records of many post-mortem examinations.

Two views are held by authors who assert that the crepitant rale has its origin within the air-cells. One is that the rale is produced by the agitation of fluid within the air-cells; the other, that as the air-vesicles are dilated in inspiration their walls are suddenly separated from their fluid contents to permit the passage of the current of air, and that these rales may sometimes arise from the sudden separation of the cohering walls of the alveoli quite independently of the existence of any trace of exudation.\*

The subcrepitant rale is supposed to have its origin in the smaller bronchi, and to be caused by the bursting of bubbles of air.

If these views are true, the respiration must have considerable force in the air-vesicles, and smaller bronchi, or at least there must be a current of air passing in and out with each respiration. But physiology teaches that this does not occur. The change that takes place in the air in the air-cells and smaller bronchi is not by currents of foul air passing out in expiration and currents of fresh air passing in with inspiration, but the change is governed by the well-known law of the diffusion of gases. "This diffusion is constantly going on, so that the air in the pulmonary vesicles, where the interchange of gases with the blood takes place, maintains a pretty uniform composition."\*

"By diffusion," says Foster, † "the new or tidal air gives up its oxygen to and takes carbonic acid from the old or stationary air. In this way, by the

ebb and flow of the tidal air, and by diffusion between it and the stationary air, the air in the lungs is being constantly renewed." "Now, it is obvious if no provision existed for mingling the air inspired with the air already occupying the lungs, the former would penetrate no farther than the larger air passages. The change [in the air in the lungs] must be attributed to the 'mutual diffusion' of gases, these tending to interpenetrate one another, when of different densities or of different temperatures." ‡

That such is the case is evident from the fact that only about one-tenth of the air in the lungs is changed in each respiration. When one lung is crippled by disease the other lung does extra work, as is evidenced by harsh respiratory murmur over the unaffected side, and the diseased lung receives less air than usual at each respiration. And yet it is over such a lung, receiving a small amount of air and in which there can not be currents in the smaller bronchi and air-vesicles, that crepitant and subcrepitant rales are often heard. That rales may arise from the sudden separation of the cohering walls of the air-cells is contrary to the teachings of physiology. The air-cells do not collapse in expiration; nine-tenths of the air in the lungs at the end of inspiration remains at the end of expiration. That rales may arise in air-cells partially filled with exudation by the separation of their adhering sides seems more probable. But it must be remembered that little air enters the parts of the lung where the exudation has taken place; there can be little or no current; the lung is crippled, and expansion and contraction take place to a very limited extent. Has any satisfactory proof ever been adduced to show that crepitant rales are naturally produced under this condition? I think not. On the other hand, that crepitant and subcrepitant rales are produced within the pleura has strong evidence in its support.

Cases are on record § in which rales were heard a short time before death, and, on post-mortem examination, pleuritic exudation was found in the same situation, while the lung beneath in some cases was not diseased; in others there was consolidation, so that no air could have entered the lung in the neighborhood where the rales were heard. To test the correctness of these views, advantage was taken of the large number of cases, of pleuro-pneumonia which destroyed so many cattle a few years ago. "In 1879 a commission was appointed by the United States Government having for its object the stamping out of contagious pleuro-pneumonia among cattle. In August of that year Dr. Leaming was invited to make examinations of some of these cattle, and his diagnoses were to be tested by post-mortem examinations

\* "Physical Diagnosis." Guttman.

\* Flint, "Physiology," vol. i. p. 407.

† Foster, "Physiology." London, 1877, p. 219.

‡ Carpenter, "Physiology." Philadelphia, 1853.

§ "Physical Signs of Interpleura Pathological Processes." Dr. M. R. Leaming, "Med. Record," May 25, 1878

performed immediately.\* In every case where rales had been heard, pleuritic exudations was found, and where pleuritic exudation was found there had been rales. In six of these cases one lung was completely consolidated; therefore, no air could enter and no rales be produced in them."

Those who are accustomed to make post-mortem examinations know how frequently extensive pleuritic adhesions are disclosed, and cases are not infrequent in which there is little disease of the lung beneath.† In these cases an abundance of rales of different sizes are often heard, but they are usually diagnosed as intrapulmonary, and, therefore, the result of the autopsy is a surprise to those who make it.

I can find nothing in the details of carefully recorded cases to disprove these views. The cases recorded by Laennec † and by Louis § show that crepitant and subcrepitant rales were only heard over the site of pleuritic adhesions.

If the views expressed in this paper be true, it follows that some sweeping changes will be necessary in our present interpretation of physical signs. Therefore, the facts here advanced should be carefully weighed before being accepted. Facts, however, as opposed to theory, will always be accepted in the end, and in this paper I have endeavored to show not only that fine rales can not be produced within the lungs, but that they are in fact produced within the pleura.—*New York Med. Journal.*

#### A SEDATIVE EMMENAGOGUE.

For a day or two antecedent to the actual commencement of the catamenial flux, women not infrequently suffer acute pain in the pelvic region, doubtless due to hyperæmia and hypæsthesia of the reproductive belongings. To obviate this I have found no treatment give such satisfactory results as the following :

℞ Codeiæ sulphatis, gr. j.  
Chloral hydratis,  
Ammonii bromidi, aa grs. xx.  
Aquæ camphoræ, ʒ j. M.

Sig.—For one dose. Take at bedtime.

A repetition of the dose at that period is rarely necessary. In some cases a warm sitz-bath of fifteen minutes duration, before retiring, is a valuable adjuvant.—*Virginia Medical Monthly.*

\* J. R. Leaming, M.D. Art. "Endemic Pleuro-Pneumonia." *Med. Gazette,* February 7, 1880.

† Dalasfield, "Pathological Anatomy." Case, p. 28.

‡ Laennec on "The Chest." § Louis on "Phtthisis."

#### BISMUTH IN DYSPEPSIA OF CHILDREN.

E. W. Dunbar, M.D. (Zurich), M.K.Q.P.I., contributes the following to the *Practitioner* :

Loss of appetite in children with pain after eating, nausea, and depression, if accompanied by a tongue either clean or slightly coated, but showing redness and enlargement of the papillæ fungiformes, is quickly relieved by administration of bismuth, either in the form of the subnitrate or of the solution of the oxide in ammonia and citric acid as discovered and prepared by Mr. Schacht. The dyspepsia, which is characterised by the described appearance of the tongue, is produced by indigestible food. If the tongue is coated the dyspepsia is recent, and it is chronic and of some duration if the tongue is clean; loss of appetite and consequent diminution in the amount of food taken having given opportunity for the tongue to clean.

The digestion of children being easily disturbed, this form of dyspepsia may very frequently be observed among them. It is often necessary to persist in the use of bismuth for several weeks before the papillæ fungiformes resume their normal appearance and a lasting cure is effected, although improvement shows itself quickly in the appetite and returning liveliness and cheerfulness of the little patient. The action of bowels is as a rule markedly improved and more regular, especially if the liquor bismuthi is used; exceptionally the bowels are rendered more constipated, and it is necessary to give a mild aperient occasionally.

While testing the accuracy of the described indication for the use of bismuth I prescribe it, owing to the state of the tongue, in the case of a child who had an obdurate cough that had resisted all the usual remedies for subduing irritation of the larynx. The cough ceased with the improvement which quickly succeeded the dyspeptic symptoms. The dulness and languor produced by this form of dyspepsia in children may easily be mistaken, especially if the tongue is clean, for weakness and a condition requiring tonic treatment. The marked distaste for food and the characteristic tongue point to the true nature of the ailment.

The dose of liquid bismuth varies from two minims under one year, to three, five, ten, fifteen, and twenty minims up to twelve years of age; the dose to be repeated twice to four times a day according to the severity of the symptoms. The remedy appears to be most effectual when taken after meals. The subnitrate may be given in doses of one-half grain up to two, three and five grains.

Bismuth is quite ineffectual in the dyspepsia of children where the tongue is smooth, clean, and shows no enlargement or redness of the papillæ fungiformes.—*The Cincinnati Lancet and Clinic.*

## THE SUBCUTANEOUS INJECTION OF ETHER.

It should be more generally known that ether injected subcutaneously has a powerful stimulant effect, and is remarkably efficacious in cases of extreme depression of the powers of life. It has long been used to a limited extent in such cases, but increasing experience has enlarged the domain of its application. In adynamic pneumonia, in fevers when failure of the vital powers is threatened, in the puerperal state, in cases of thrombosis of important vessels, the injection of ether has been lately used with singular benefit. Besides, as a stimulant in conditions of depression, it has important applications as a hypnotic and local anodyne. In cerebral excitement and wakefulness, accompanied by depression of the arterial circulation, it is most useful. In the more chronic cases of superficial neuralgia, as sciatica, lumbago, intercostal pain, zoster, etc., injected in the neighborhood of the affected nerves often gives surprising relief.

There are contra-indications to its use. It is not proper in the cases of cardiac depression due to chloroform or ether narcosis, and yet it has, in the confusion incident to such an event, been freely injected on the cessation of the cardiac or respiratory movements. Under similar circumstances, alcohol has also been freely injected subcutaneously, but this practice is equally improper—and both for the obvious reasons that these are synergistic agents. Ether, subcutaneously, is also not a suitable remedy when there is arterial excitement with power.

The technical details are simple. Ether must be injected with a glass or metallic syringe. Rubber and celluloid are damaged by it. As ether dissolves the oil with which the piston is lubricated, the syringe should always be put in order after ether had been injected. It is a useful precaution, also, to see that no particles of dirt or of leather are taken up with fat. Vaseline appears to be the safest lubricant under these circumstances. From ten to sixty minims is the dose—fifteen minims being the quantity most frequently injected. Some smarting attends the operation, but if the operator is careful in withdrawing the needle to press on the orifice tightly to prevent the ether escaping, much smarting will be thus obviated. A puffy swelling is caused by the vaporization of the ether, but this presently subsides, and only rarely is an indurated knot formed. An anesthetic and analgesic area of limited extent surrounds the puncture.

The ether used should be of good quality—as good, indeed, as that now employed for inhalation. The number of times injected will depend on the character of the case, but there appears to be no reason why it may not be injected frequently. Three or four times a day has been the rate in cases of adynamic pneumonia. When sudden, extreme depression of the heart is to be overcome, ten or

twenty minims can be injected every five minutes, until some result is reached.

The systemic effect is that of a stimulant; the action of the heart is increased, the surface grows warm, and the nerve centers and the organs of the body in general functionate more quickly and powerfully. The curative results of the subcutaneous use of ether are not only different in degree, but in kind, from the stomachal administration of the same agent. This fact must be recognized to obtain a correct notion of the utility of this practice.—*Phil. Med. News.*

## THE CANADA MEDICAL RECORD,

A Monthly Journal of Medicine and Surgery.

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MONTREAL, AUGUST, 1883.

## LAVAL AND VICTORIA COLLEGES.

In common with the majority of the profession in Canada, and with many in the United States, we have watched with much interest the struggle which, for several years, has been going on between these two Medical Schools. It is not in our power to give a full résumé of the entire dispute, for it would occupy many columns of the *Record*. A brief outline of it, however, may at this time, be interesting, and assist those who have not carefully followed the controversy, in understanding the position which matters occupy at this moment. There never has been any cordiality of feeling existing between the Catholic dioceses of Montreal and Quebec. The former always looked forward to the time when its wealth would be used to found a new Catholic University, while the latter felt that they already had what must remain the Catholic University of the Province of Quebec. In this latter assumption they apparently had the countenance of His Holiness the Pope, who always discouraged the establishment of a new University. In 1877 Laval made its first attempt to obtain a foothold in Montreal. A Law Faculty was established, and it was well known that a Medical Faculty was to follow. The constitution of this Faculty was a source of much coquetting, in which the late Bishop Conroy played a not unimportant

part. It was finally announced that the Faculty of Medicine of Victoria College, formerly known as the School of Medicine and Surgery, as a body, or almost so, had become the Medical Faculty of Laval University in Montreal. If we mistake not they took part in a celebration at Quebec, in their capacity of Professors of Laval. Things were apparently running smoothly when it was announced that they, or the majority of them, had seceded, and not having severed, their connection with Victoria, would continue their school as before. This turned out to be correct, and the reason assigned was, that in their new position they found that their autonomy was lost. Naturally, gentlemen who had conducted with success the largest French Medical School in Canada, felt that they could not become cyphers in the future management of the Faculty which they had entered. They therefore determined to exist as before, a separate independent organization. Each Faculty filled up its ranks, and from that moment the struggle began. Victoria having an agreement for medical control with the nuns of the Hotel Dieu hospital, closed its doors to the members who remained on the Laval staff, and would not allow the entrance of her students. The Laval men, backed by the Seminary of St. Sulpice, opened a new hospital, now known as the Notre Dame, which from its inception has been a credit to its promoters and supporters, and at the same time began their first course of lectures. Victoria tried to close the Laval branch here, as being illegal, and Laval appealed to the Provincial Legislature to set aside any doubt there might be in the matter, and by special act empower the opening of a branch in Montreal. The struggle in the Legislature was a bitter one, but Laval was victorious. In an appeal made by Victoria to the Governor in Council, to set aside the Quebec Act, they met with failure. Then followed suits in court, which were never pushed. Now began really the religious side of the question, at all events so far as the general public were concerned. Both sides sent deputations to Rome, but almost invariably failure came upon the head of Victoria. Still the "school" seemed undismayed, and no sooner were they defeated upon one point, than another was forthcoming upon which the war raged more fiercely than ever. But all things must have an end, and when this summer the apparently final appeal was made to a committee of Bishops in the Province, it was felt by a large

number that whatever interpretation these gentlemen gave to the last *mandamus* from Rome, must be accepted by the contending factions. Through this committee, Laval, with a view of something like a compromise, offered the Faculty of Victoria, if it would quietly cease to exist, three active professorships, and three Emeritus professorships. But the Victoria Faculty, with an adherence to principle which has been conspicuous in them throughout the contest, determined to succeed or fail together. In this we believe they acted wisely, for at the eleventh hour to have accepted the terms proposed would have destroyed that *esprit* which cohesion had so far given them, and which the Medical historian of this Province will record to their unbounded credit. The decision of the Bishops came at last, and all who read it, felt that, at length, there seemed no possible loophole through which Victoria could continue the fight. Students were, under pain of excommunication, ordered to attend Laval, while the same penalties were uttered against the professors of Victoria College unless they consented to close, and against any student who attended a Faculty of Medicine connected with a Protestant University. For one moment let us turn aside from the relation of facts to give utterance to the regret which we, in common with thousands, feel, that in this nineteenth century such a *mandamus* could issue from a body of educated gentleman in relation to the study of a profession which does not meddle with religion in any shape or form. We believe we but re-echo the sentiments of hundreds of Catholic physicians throughout the country who have graduated at Medical Schools connected with Protestant Universities, when we say that during the entire term of their pupilage they never heard the question of religion raised by their professors in the classroom, and that they graduated good Catholics, having as sincere a respect and regard for their religion as when they became students of medicine. When the smoke and excitement of this *mandamus* cleared away, it was learned that apparently one little chance yet remained to Victoria, viz., an appeal to Rome by the Sisters of the Hotel Dieu, who in view of the relations which had so long existed between them and the Montreal School of Medicine and Surgery (Victoria College), and the legal position in which they might find themselves placed by closing the hospital to them, asked that things might continue as before. While waiting for the response to this

appeal, a delegate, in the person of the well known oculist in Montreal, Dr. Desjardins, left for Rome, in the apparently hopeless task of getting his Holiness the Pope to reverse the decision of the Council of Bishops. In the meantime the answer arrived for the sisters—they must obey—close the hospital to Victoria, open it to Laval. Surely every vestige of hope was gone now, and the almost hopeless task of Dr. Desjardins became a forlorn hope. Some of those connected with Laval waited on the Ladies of the Hotel Dieu to arrange for getting the entry of the Institution, when a difficulty arose, the nature of which we do not know, save that it showed that these good sisters felt their hearts still warm to Victoria, and still unwilling, after so many years of friendly contact, to cut them entirely adrift. Few who scanned the situation well but felt that the sky was very dark, and that Victoria seemed all but dead, and that she was dying nobly, fighting to the last. But on the 27th of August, news came to the school from Rome “open as usual,” and to the Bishop of Montreal, to much the same effect. Why this sudden change is not known, save that a powerful pleader for Victoria was then there, in the person of one well calculated from his special line of professional work to take the dust out of persons' eyes. We need hardly say that the news spread like wild-fire, and was soon the topic of the city, while the friends of Victoria were profuse in their congratulations to each other. We too rejoice, not because we oppose Laval, but because we are opposed to any attempt to crush out a school, in the manner adopted by Laval University, supported by a powerful party in the Roman Catholic Church. At the same time we are glad that Laval has opened a Medical School in Montreal, and though she has not gained, as yet at all events, her desire that Victoria shall cease to exist, we hope to see her remain here, and work out her own destiny. Her advent, in spite of the bitter struggle, has done Victoria good, stimulating the latter's energies, many of them being in a latent condition. Victoria had thought herself monarch of all she surveyed, and in many ways had become a little fossilized. The existence of Laval, as a competitor to her in Montreal, has awakened her from her dream, and if her life be prolonged she will no doubt equal any school in Canada, in the means at her disposal, to teach the science and art of medicine.

#### DR. MORELL MACKENZIE ON “AMERICAN CATARRH.”

In a recent number of the *British Medical Journal*, there is an abstract of a lecture delivered at the London Hospital Medical College by Dr. Mackenzie, on catarrh of the nasopharynx. A severe type of this disease he found to be so prevalent in America that he calls it a “national complaint,” and names it “*American Catarrh*.” It is widely diffused over the continent but prevails principally between latitudes 44° and 38°. It is not as severe in Canada as in the United States. He attributes it to the irritant effects of dust in the air, for he says, “dust is to be found everywhere in America.” He paints the following gloomy, picture:—“The universal prevalence of catarrh is, indeed, fully explained by the abundance of dust, both in the country and in the cities. Owing to the immense size of the country, and its sparse rural population, the country roads have not, as a rule, been properly made, and except in some of the older States, are merely the original prairie tracks. In the cities, notwithstanding the magnificence of the public buildings, the splendor of many of the private houses, and the beauty of the parks, the pavement is generally worse than it is in the most neglected cities of Europe; such indeed as are only to be found in Spain or Turkey. It must be recollected also that, whilst in the decayed towns of the Old World there is very little movement, in the American cities there is a ceaseless activity and an abundance of traffic. Hence the dust is set in motion in the one case, but not in the other. The character of the dust, of course, varies greatly according to the locality. In some parts, it is a fine sand; in others an alkaline powder; whilst in the cities it is made up of every conceivable abomination, among which, however, decomposing animal and vegetable matters are not the least irritating elements. An idea may, perhaps, be formed of the state of the atmosphere from a consideration of the fact that in many cities the functions of the scavenger are quite unknown. That a dusty atmosphere is the real cause of postnasal catarrh is rendered probable by a consideration of the anatomical relations of the nasopharynx; for owing to its being a cul-de-sac out of the direct line of the respiratory tract, particles of foreign matter which become accidentally lodged in its upper part are got rid of with difficulty, most likely by an increased secretion, which, as in the case of the conjunctiva, washes away any gritty



substance which may temporarily alight on the membrane. As regards the larynx, irritating dust is expelled by coughing, which may be either reflex or voluntary; and again, in the case of the nasal passages, the minute particles of matter which constitute dust are expelled, if they happen to be obnoxious, either by sneezing or blowing the nose. But reflex acts, such as coughing and sneezing, have no effect on the upper part of the nasopharynx, and it is only by a voluntary act known as "hawking" that this cavity can be partially cleared. It is probable also that, owing to the sensibility of the nasopharyngeal mucous membrane being less acute than that of either the nose or larynx, minute foreign bodies lodged accidentally in the vault of the pharynx do not cause an amount of discomfort at all corresponding to that in the adjacent parts; hence, particles of matter are more likely to remain in situ for a long time in the postnasal region, than in either of the other parts, and are, of course, very apt to set up disease. In this country, the complaint is most common in persons whose pharynx is large in the antero-posterior direction, a form of throat which facilitates the entrance without favoring the expulsion of foreign particles."

If Dr. Mackenzie's theory is correct, catarrh of the nasopharynx ought to be very prevalent in Montreal. It might be well to present each of our City Fathers with a copy of Dr. Mackenzie's lecture, as a gentle hint to improve the street-watering service, and as an additional argument in favor of permanent paving for our roadways.

#### HOMEOPATHY IN ENGLAND.

A homeopathic directory has recently been published in Great Britain. According to its pages there are two hundred and sixty practitioners of this class in Great Britain and Ireland, four only being in the latter country. As there are nineteen thousand nine hundred and forty-seven regular physicians, the ratio of homeopaths to regulars is, for England and Wales, one to sixty-four; for Scotland, one to one hundred and seventy; and for Ireland, one to six hundred and nine. Most of the homeopaths are in large towns; thus London has eighty-five, and Liverpool eleven. The contrast between the condition of things, as shown above, in England and in this country appears to be considerable. It is claimed that there are about six thousand homeopaths, so called, in the United States, giving a ratio to regular practitioners of about one to ten.

#### ANGLING DOCTORS.

The late Dr. G. W. Campbell was well known as one of the keenest salmon fishers in Canada, and we are glad to learn that the fascination of the sport is spreading among the profession. Up till a year or two ago Dr. F. W. Campbell, was the only other Montreal physician who regularly followed it. Last year Dr. R. P. Howard took his first lesson, and was so pleased that he tried it again this year on the Sagueney. Dr. MacCallum was initiated this season on the Jacques Cartier, and had excellent luck. Dr. F. W. Campbell passed a month at it this summer, making his camp first at the Forks on the Upsalquitch, N.B., then on the Restigouche, at the mouth of the Upsalquitch, and finally at Indian House on the Restigouche. Such outings are sure to give renewed health and strength to those who indulge in them, and who is more-deserving of a good holiday than the hard worked doctor.

#### PERSONAL.

Dr. Fenwick, Professor of Surgery McGill University, returned from a brief trip to England, by the *Parisian*, on the 25th of August.

Dr. Roddick, Professor of Clinical Surgery McGill University, sails for Europe by the *Parisian* on the 8th September. He will be absent till next summer. His work at the College and at the Hospital for the winter season will be performed by his colleagues, Drs. Fenwick and Shepherd. We believe it is Dr. Roddick's intention to pass the winter in London, with a view of increasing his surgical knowledge and experience, and on his return to Montreal to devote his future professional career to the practice solely of Surgery.

Dr. C. E. Cameron (M.D. McGill, 1883) has taken the M.R.C.S. England.

Dr. Mewburn (M.D. McGill, 1881), House-Surgeon to the Winnipeg Hospital, paid a short visit to Montreal this month.

Dr. Buller (Montreal), has been to and returned from the North-West.

Dr. Strange, of Toronto, and Dr. F. Wayland Campbell, of Montreal, have been appointed Surgeons to the Militia Infantry Schools of Instruction in the Provinces of Ontario and Quebec.

Mr. C. E. de Lamirande, the present detective officer of the College of Physicians and Surgeons of the Province of Quebec, has been gazetted inspector of Anatomy, under the new Act, for the Montreal District.



## REVIEWS.

*Insanity; its causes and prevention.* By HENRY PUTNAM STEARNS, M.D.; New York; G. P. Putnam's Sons, 1883.

A plain and sensible book, written by a man who has devoted much thought to his subject, and has sufficient practical experience to speak with authority, is always welcome. Dr. Stearns, who is superintendent of the Hartford Retreat, and lecturer on Insanity at Yale, has produced an unpretentious but readable book. It is written as much for the general public as for professional readers, and is well worthy a careful perusal. While admitting the exciting effects of grief, shocks, fever, &c., in the production of insanity, the writer insists upon the pre-existence of the *insane diathesis*, and points out how this diathesis is most commonly produced and how it may best be guarded against. He urges the necessity of reforming our educational system so as to respect the individuality of each pupil, and avoid the evils of routine; for this purpose, he recommends that fewer pupils be entrusted to each teacher. He attaches considerable importance to industrial education, and strikes a sound note in calling attention to the necessity of careful *home training*. Obedience is the great lesson to be learned at home. The child who does not learn at home to submit to domestic regulations, is very apt never to learn obedience to the laws of the land; and the passionate self-willed child is apt to exhibit in after life so-called emotional insanity or irresistible impulse. Many other important subjects are discussed, such as heredity and marriage, the effects of alcohol and tobacco, the importance of sleep and recreation, etc.

*Sore Throat; its nature, varieties and treatment.* By PROSSER JAMES, M.D. Fourth edition, enlarged. Philadelphia: P. Blakiston, Son & Co.

Few writers upon the Laryngoscope are better known than Prosser James. In 1860, the first edition of this book was published; it was then the first text book on the Laryngoscope in the English language. Since then it has gone through several editions, and appears now thoroughly revised as one of Blakiston's Handbook Series. It is well got up, and its cheapness brings it within the reach of all.

## CORRESPONDENCE.

To the Editor of the CANADA MEDICAL RECORD.  
QUININE PILLS.

The publication in a Medical Journal, some time ago, of an article based on analysis of quinine pills of well-known brands, showing shortage, as might be expected, caused much commotion amongst the manufacturers concerned, and the Pharmaceutical Journals have been commenting on the subject ever since. At first the manufacturers contented themselves with raising objections to the unknown analyst, whose name did not appear, and to the medical editor. They also assumed that their reputations would sustain them against one assault. Subsequently an analyst, whom the manufacturers could not well attack, Diehl, of Kentucky, published his results, and these placed the pill-men in a worse position than before. Special pleading is now in order, the last effort we have seen, in this direction, being by Lloyd, of Cincinnati, in a paper read before the Indiana State Pharmaceutical Association, occupying five columns in N. Y. Druggist Circular for August. In it he elaborately argues that deficiency may be accounted for by the destruction of the quinine in the pill, by time and the complex excipients used in the mass, thus giving away the pill business badly.

It would seem that the pill-men ought to have a better defence than this, the amusing thing now is, that the manufacturers have been in the habit constantly of publishing analyses, in some cases by independent and competent chemists, showing the pills to be all right, and frequently, even, with a slight excess of the costly ingredient. As the analytical processes of pharmaceutical chemistry, are beyond the scope of the general practitioner, the latter will probably come to some such conclusions as the following, as the result of all this discussion, and his patients will be no sufferers thereby.

To avoid all ready-made pills, whether round, square or flat. To exhibit quinine in powder or simple solution freshly made. If the pill form is decided on; to prescribe the quantity desired in the pill and leave the manipulation and excipients to some dispensing chemist, in whom he has confidence, only stipulating that the mass be freshly made each time.

Yours, etc.,

T. D. REED, M.D.

Montreal, 29th August, 1883.

## BIRTH.

At Emileville, St. Pie, on the 28th July, the wife of Dr. E. A. Duclos of a son.