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# CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

Compound Dislocation of the Ankle treated by Cold Water. Reported by Drs. Whitcolm and Fuller.

Pare, butcher æ 24, temperate and of robust constitution, received a compound dislocation of the ankle, by a fall from a waggon on May 19th. The foot was turned inward, at a right angle with the leg, and through the wound on the outer side of the ankle, which was about 41 inches in length, projected the astragalus and external maleolus. quite moveable; the internal maleolus could be easily felt, and all the ligaments of the joint appeared to be ruptured. Excision or amputation was advised, but the patient being unwilling to submit, it was determined, in consultation with Dr. Abbot of this place, to reduce the dislocation, which was easily effected after placing the patient under the influence of chloroform. A splint, secured by two straps, was applied to the inner side of the leg, with a pad against the foot, and the wound was brought together by stitches. Ordered a morphia powder, and the leg and foot to be covered with cloths dipped in cold water, and to be changed as often as they became warm; urine was drawn off by the catheter.

20th.—Rested well during the night, some pain in the joint this morning, which discharges a bloody serous fluid; the leg is warmer than the other; morphia every six hours, and water to be poured over the foot and leg in a continual stream.

Evening.—Pain increased, some fever; ordered pounded ice in a bag to be applied to the leg and shifted often from place to place, the ankle and foot to be kept cool by pouring on as much cold water as necessary, the surface of the body to be sponged with cool water, and a morphia powder every fourth hour.

21st.—Rested pretty well, much pain at intervals, some fever, and tongue slightly coated. Ordered iced water to be poured over the foot D

and ankle. Morphia every third hour, and the fever to be kept in subjection by cold sponging every two or three hours if necessary, which the patient expresses as very grateful to his feelings, relieving the chills to which he is subject, and generally giving a short but refreshing sleep. Bowels opened by a saline.

22nd.—Did not rest well, much pain at times in the joint, fever increased, tongue dry and brown in the centre; discharge from the joint is small in quantity and composed of a bloody serum mixed with thick flocculent matter; morphia increased, surface of the body to be sponged very often so as to keep it as near as possible at the normal temperature.

23rd.—Slept well, but talked much in his sleep, tongue dry and brown, pulse 100, softer than yesterday, occasionally great pain in the joint, bowels opened by a saline purge.

24th.—Slept well, less fever, tongue cleaner, surface of the body only bathed three or four times during the last twenty four hours; patient complains of the water on the leg being too cold. Ordered it to be used without ice and the ice bag to be shifted more frequently.

25th.—Slept only a few minutes, great pain in the joint all night, pulse frequent, fever rather high, leg and foot look ædematous and gets warm very quickly if the water is not applied constantly in a full stream. The edges of the wound are inverted and hard, and portions of swollen ligament and fascia projecting from between the stitches, hang in white shreds, like meat that has been long in running water. The discharge from the joint is a thick white gelatinous matter somewhat resembling pus, in which small flakes are seen. There has been no throbbing pain felt in the joint. Iced water again to be applied to the foot and leg; opium freely administered. Cold sponging frequently to the body.

26th.—Less fever, a dull aching pain in the joint at times, much pain complained of in the dorsum of the foot, especially at the roots of the toes, also a sharp pain in the centre of the sole of the foot; wound covered with oiled silk, and a dose of castor oil ordered, to be followed by a scidlitz powder in the afternoon.

10 P.M.—Great pain in the joint, sometimes throbbing, pulse 120, weak. Hypodermic injection of  $\frac{1}{3}$  gr morphia, which gave immediate relief.

27th.—Slept very well; feels better; pulse 100; less pain and heat in the leg and foot; discharge from the joint is thick and bloody, but no pus can be detected. Ordered water to be used without ice.

3 P.M.—Fever increased; pulse 120; patient shivers, though he says he does not feel cold; complains of shooting pains through the joint, from the inside to the outside of the ankle, generally followed by a dis-

charge from the wound. Ordered the water to be used at a temperature agreeable with the patient's feelings, but to keep the leg and foot cool by using a larger quantity; the surface of the body to be bathed with tepid water, followed by brisk frictions, until the fever and chills subside.

28th.—Slept well, but interrupted by dreaming; tongue is cleaner, and general symptoms better; heat in the leg and foot diminished; the water is used in less quantity, and little more than tepid; appetite is improving; discharge from the joint more copious, and thinner; the patient passed his urine to-day without the use of the catheter. Ordered a seidlitz powder morning and evening.

29th.—No pain complained of; water gradually diminished, and wet cloth substituted.

30th.—Leg and foot red and hot, and numerous red blisters forming; especially on the foot; those on the sole contain some blood; looks something like spots of acute purpura. Fever is abating; tongue is clean, and appetite good. Ordered the leg and foot to be kept wet by sponging, and evaporation promoted by a current of cool air by the use of a bellows or fan. Discharge from the joint is serum, tinged with blood (turbid); about half an inch of the edges of the wound in front, where it was most exposed to the water, is drying, and looks semi-transparent, like raw hide. Nitrate of silver applied to the projecting ligament.

June 5th.—Gradual improvement up to this time; some odor in the wound; discharge from the joint is a light serum, slightly tinged with blood; has complained of occasional pain in the joint; sometimes throbbing on the inner side of the ankle, where there is a swelling and obscure fluctuation; shooting pains have occurred two or three times a day, followed by a discharge from the joint. Ordered charcoal to be added to the poultice on the wound, and the swelling to be painted with tincture of jodine.

6th.—Swelling softer; fluctuation more perceptible; slight granulations appearing in the bottom of the wound. Ordered foot to be painted with tinct. iodine. Splint removed, and leg put on to the double inclined plain; the stitches were removed, and a liberal diet allowed.

9th.—Granulations rising higher in the wound; sloughs partly separated, removed; considerable discharge of pus from the wound, and reddish serous fluid from the joint; swelling on the inner side of the ankle soft; fluctuation distinct; a puncture, with an exploring needle, was followed by the discharge of about half an ounce of light-colored serum; the orifice made by the needle was sealed, and the swelling painted.

11th.—Sloughs all separated, with the exception of a small piece of

ligament, situated at the opening into the joint; granulations look weak. Ordered the poultice to be mixed with infusion of sumack.

13th.—Sloughs all separated, and no discharge from the joint; wound looks clean, the posterior part, for about an inch, covered with a pellicle of new skin; granulations, being high, were touched lightly with caustic, and lint, saturated with the red wash, applied to the wound. The abscess on the inner side of the ankle pointed; it was freely opened, and discharged a saneous pus; compresses were applied over the sides of the abscess; the foot was drawn to the outside by a long wide plaster, and the edges of the wound approximated.

14th.—Patient can move his toes, and is ordered to practice movement twice a day, if no irritation ensues.

18th.—The edges of the wound are approximated, by means of plasters, each day; it looks very healthy, and the joint is closed; no tenderness on the inner side of the ankle; compresses removed. The patient moves his toes back and forth about an inch; also, can move them inward and outward slightly. Ordered to practice all the natural movements of the joint.

July 8th.—The wound is entirely healed; all the natural movements of the joint have been steadily practiced, and frictions applied to the foot and leg. There is some edema of the foot and leg, especially in the evening, after resting it on the floor, which the patient does often, in order to habituate it to the position. The patient goes about on crutches. Ordered a bandage to be applied to the foot and ankle, and to practice, while standing, to place the injured foot behind the other, and touch the heel to the floor.

### CORRESPONDENCE.

To the Editors of the Canada Medical Journal:

GENTLEMEN,—If you think the following remarks deserving of an insertion in your periodical, they are at your service.

Among the many annoyances and disappointments to which the medical practitioner is subject, none are of more frequent occurrence than the treatment of cutaneous diseases; and amongst these Eczema, called by the laity Rifle, so common to infants in this country, stands pre-eminent. During many years I employed various modes of treatment, recommended in books, and met only with disappointment; until at last I adopted a mode of treatment of my own, since which,

instead of disappointment, I have generally had reason to feel satisfaction; and, therefore, wish to make the same known.

My mode of treatment consists in bathing the affected parts, three or four times a day, in a weak solution of the carbonate of soda. Another excellent external application is common wheaten flour, which can be substituted for the sodaic solution, whenever the latter shall have ceased to produce beneficial effects. I sometimes employ both simultaneously, using the solution during the day time and the flour at night. Soda is also to be administered internally. I dissolve two drachms of the carbonate in eight ounces of water, and of this solution I give from a teaspoonful to a tablespoonful, according to the age of the child, three or four times a After the child has taken this quantity, I substitute Fowler's solution of arsenic-half a drachm in four ounces of water; from a teaspoonful to a desertspoonful, according to the age of the child, twice a day only; and when this amount is consumed, I resume the sodaic solution; and so on, alternately, until the cure is complete, which generally happens in a few weeks. Some cases, however, do not yield to this treatment; this is especially the case where Eczema is complicated with some other affection; in such, other means must be employed. But my experience is decidedly against having recourse to continued cold applications or debilitating medicines, for, although the eruption can sometimes be made to disappear by such means, yet the internal organs are liable to suffer, especially the lungs.

In conclusion, I beg leave to solicit my medical brethren to make trial of my treatment; they will find few cases of uncomplicated Eczema that will not yield to it; and they will have the further satisfaction of knowing that it is a mode of treatment at once simple, and not likely to be productive of any bad consequences.

I am your humble servant,

MEDICUS.

What killed Dr. Hodgkin? Impure water. We wonder that travellers do not carry with them a little bottle of solution of permanganate of potass—a few drops of which would speedily purify any water. A friend of ours, who had just returned from India, tells us that he has derived the greatest benefit from its employment. At stations where the water was turbid, and tasted and smelt of decaying organic matter, he found the addition of a few drops of the solution of the permanganate made it in a few minutes as clear and sweet as spring water.—Medical Times and Gazette.

### REVIEWS AND NOTICES OF BOOKS.

Asiatic Cholera, its crigin and spread in Asia, Africa and Europe; introduction into America through Canada; remote and proximate causes; symptoms and pathology, and the various modes of treatment analyzed. By R. Nelson, M.D., Health Commissioner during the first two invasions, 1832, 1834, President of the Medical Board for the District of Montreal. New York: William A. Townsend, Publisher, 434 Broome Street, 1866. 8 vo. pp. 206.

Cholera: Facts and Conclusions as to its Nature, Prevention, and Treatment. By Henry Hartshorn, A. M., M. D., Member of the American Philosophical Society, Fellow of the College of Physicians of Philadelphia; Professor of Hygiene, Auxiliary Faculty, University of Pennsylvania, &c. Philadelphia: J. B. Lippincott, & Co., 1866, pamphlet p. 79.

We have received the above works; that of Dr. Nelson being a small volume of 206 pages, written in a very pleasing style, and sufficient to convince any person who does not bring to bear his own observations of this disease, of the highly contagious nature of cholera.

Dr. Nelson's views are of great weight, as he brings into the discussion a clear intellect, much research and critical observation, extending over all the epidemics of this disease since its first appearance on this con-There is one announcement in this work which is at once novel and suggestive. It is where the author states "cholera morbus and cholera spasmodica or Asiatic cholera, are two distinct states of the body. The first is a disease, the second is not." If not disease then what is it: we leave the author to reply "it is a poison." We may here remark, the same view, though modified, seems to be entertained by Dr. George Johnson, and with a desire of eliminating this poison he recommends the employment of purgative doses of castor oil. Can we not find in the whole range of our extended pharmacopæia the means of decomposing this poison. It would be truly a serious error if in poisoning with bichloride of mercury we gave castor oil with a view of driving out the poisonous compound, to the exclusion of white of egg which so easily and effectually decomposes it and renders it innocuous. Why cannot we find an antidote to the cholera poison, if poison it be? At page 78 the author says:

"Reader! do not believe me, but learn for yourself, as I have done. The delusions created by education are delightful; so that few things are more painful to the deluded than an attack upon, or a refutation of, their fond and long cherished errors.

"The practitioner who calls cholera a disease will carry into practice his habits of treating disease where none exists, and work up for his guidance the idea of an imaginary pathology and a physiology which cholera utterly refutes. Out of this error in a name the wildest notions of medication have been adopted, useless in all cases, injurious in nearly all, and horribly cruel to the patient in many, as shall fully appear in the chapter on *Treatment*."

A little farther on our author gives a sad but we fear truthful statement of "the remedies which have been used in cholera, asserted to have cured nearly every patient." It is passing strange that our author should have selected one of the many remedies, perhaps the least successful of those enumerated in his list,—we allude to opium—and press on his readers the necessity, nay more, almost the criminality of the practitioner who seems to follow his injunctions as regards this drug, with so much scepticism. Does he still adhere to the absurdity, the "delusions, created by education" which are so "delightful." In this list of remedies all are enumerated except, perhaps, the novel method of Mr. Gason, of plugging up the rectum with a folded towel. Our author states at page 169:

"The foregoing list of heterogeneous remedies is not the production of quacks, but was seriously published, strongly recommended by practitioners of eminence, and who, to say the least, ought to have known better than to publish their conceits, and ought now to blush at their errors."

And yet he publishes his own "conceit;" nor does he tell us now he blushes at his own error. As an historical record of this most singular malady we would recommend this work: it deserves a place in our libraries; it is a curiosity of medical literature.

Dr. Hartshorne has had some experience with cholera during the later epidemics of 1849, and upwards; without claiming novelty for his views he declares his purpose to be a desire to give the results of a careful examination of facts bearing on the subject of cholera, and if possible arrive at results having a direct practical application.

The author gives a succinct account of the steady advance of the epidemic visitation which commenced its march in 1817, from Jessora. Several interesting facts are mentioned, proving beyond doubt the spread of the epidemic in spite of military cordons, and other means to arrest its progress, although the strictest non-intercourse with infected districts was maintained—one or two of these instances we will mention.

The question of causation is treated in a spirit of honesty; no attempt

is made to force on the reader convictions unsupported by facts; the question of contagion, which cannot be considered definitely settled, as a cause of the spread of the epidemic is also gone into, the author giving his opinion against the belief in the spread of the disease alone through human intercourse.

"Whatever the amount of travel, cholera moves with extreme slowness against the wind. This is especially observable in India; where, as Orton has recorded, it takes sometimes three months to pass over the distance of a ten days' voyage, notwithstanding constant communication-

"When the epidemic first reached England, in 1831, after having been in Berlin and Hamburg, it appeared in Sunderland, October 26th. It did not reach London until February, 1832, notwithstanding constant communication between that city and the infected district.

"One of the Western Islands, beyond the coast of Scotland, on the other hand, was attacked by the disease, although the intercourse between it and the main land was so rare that the clergyman of the island continued to pray every week for King William the Fourth, for eighteen months after Queen Victoria had ascended the throne.

"In 1832 and 1848, the town of Annan, nearly equidistant from Carlisle and Dumfries, and right upon the main line of traffic between those towns, escaped cholera altogether, while it prevailed both at Dumfries and Carlisle."

The author also gives authenticated instances "where transportation by persons seems to have occurred," and a little further on gives the following as his own conclusions.

"All of these, together, would count, I suppose, since 1817, possibly fifty or a hundred individuals, who might be acknowledged to have taken cholera, in immediate sequence upon exposure to contact with the persons or clothing of cholera patients, in localities not at the time under the epidemic influence.

"Granted, then, that such was the case. They are, clearly, exceptional instances. If cholera was in any proper sense contagious, could the instantiae crucis possibly be so few and hard to find or prove? No! But how do we account for these? On the principle of fomites; of occasional, very rare, carrying of the cause of cholera, the "germs" of it, in clothing, merchandise, or by the person of a human being; as one might carry skippers on a piece of cheese in his pocket, or a paper of flower-seeds in his carpet-bag.

"Practically, what is the difference between this and contagion? Much indeed! When the cause of the disease is a somatic (bodily) contagion; no prevention of it is available, except the total and remote avoidance

of those persons who have it, and of things which have been in contact with them. When the cause is an extra-somatic infection, depending for its production, multiplication, and transportation, on local and atmospheric conditions, not personal—then those conditions may be met preventively; and the very rare carrying power of fomites may be reduced to nullity, by sanitary precautions. Against contagion, we would have only quarantine; a most "lame and impotent" defence. Against infection, we have the amply sufficient measures of sanitary police and management.

"Contagion, as a theory, would explain only a minority of the facts concerning cholera, and is not required to explain them. Infection will explain all."

On the question of Prevention the author is determinately adverse to strict Quarantine enactments. He says:—

"Quarantine is now urged by some, and appears to be even contemplated by the Government as a part of its duty. Is it available? Will it do any good? I say, no. Theoretically, if the views advocated in the preceding pages are correct, it falls to the ground of course. But we have more than that to say against it. It never has succeeded; and never can. Let us look at the facts.

" I take the following from Dr. Brigham's work on cholera, published in 1832:

"In Russia, immense lines of troops were formed for arresting its progress; St. Petersburg was entirely surrounded by cordons sanitaires; but all these regulations, enforced by a powerful despotic government, were unable to prevent the approach and the spread of the cholera throughout the Russian Empire. The efforts of Austria were equally unavailing; for in a short time the disease passed her triple cordons and invaded the country from Poland. Prussia employed sixty thousand of her best troops to enforce her rigorous restrictions, and travellers bear testimony to their severity. And what (says the American Journal of Medical Sciences, May, 1832) have been the results? An immense expenditure of money, the suspension of commerce, a stop put to industry, multitudes deprived of the means of acquiring subsistence, and whole families plunged into misery and rendered favorable subjects for the disease; but no stop to its extension; on the contrary, its progress was rendered more fatal. As an instance of this, Breslaw may serve as an illustration and warning to other cities. A quarantine of twenty days, with difficulties almost insurmountable which it entailed, was established at the borders of the province, and maintained with a rigor which might serve as a model to other nations. But, in the midst of

this apparent security, a woman living in a damp part of the town was attacked by the cholera, and in a few days the disease spread. The most minute researches on the part of the public authorities could not discover any communication between this woman and any stranger or goods suspected of being infected."

And a little further on he says:-

"But it will be said or asked, would you abolish all quarantine—abandon all inspection of ships whatever? No; I would not. But I would abandon altogether the whole theory of quarantine, as against cholera most particularly.

"Ships should be inspected on approaching ports, because they may have unsanitary conditions intensified in them, on a scale sufficiently large to be important. This is, or should be, a part of sanitary police. Nor should it (and here is a great point of difference) include any restriction of persons; at the most, longer than enough for cleansing of the body and of the clothing, and purification of merchandise, by fresh air, and possibly by some disinfecting process in certain cases.

"I insist that SANITARY POLICE includes the sum total of available measures for the prevention of cholera in any place."

The last chapter is on the various modes of treatment, and as might be expected, the author has his own specific which he believes to be infallible. This mixture is a compound of antispasmodics and stimulants, and is as follows:—

R Chloroform, Tinet Opii, Spt Camph, Spt Ammon Arom. aa 3 iss, Ol Cinnom gtts viii Spt Vini gal. 3 ii. Dissolve a tea-spoonful in a wine glassful of ice water, and give a desert-spoonful every five minutes. appears to us, that it would be better to give the dose of the mixture, say eight or ten drops every five minutes; this is perhaps a good prescription, but we fear, not one whit better than other numerous receipts which abound in works on Cholera. The author speaks of the benefit of Houses of Refuge, and advises the removal of persons, (when attacked,) in crowded and unwholesome localties, to places of the above description; he also mentions the benefit derived from house to house visitation. feel convinced that no stop will be put to the spread of Cholera in any locality, without the strictest sanitary precautions, both personal and in the habitations of the people. The sooner our city authorities enact stringent regulations against overcrowding buildings, and overcrowding of habitations, the better. The coming year may see us subjects of an epidemic which has visited other parts of the world, and from which we have so far been spared. The perusal of this brocheur will repay the reader; we can confidently recommend it, as containing much interesting and instructive matter.

## PERISCOPIC DEPARTMENT.

# Surgery.

GUN SHOT WOUND OF BRAIN.—THE BALL REMAINS IN THE BRAIN OF THE PATIENT.

# By D. D. SAUNDERS, M.D.

S. D., act. 10 years, robust and healthy. Was wounded by a pistol shot, the ball being about the size of a buck shot, on the afternoon of Friday, 12th January, 1866.

When summoned to see the patient, on entering the room found him lying upon the bed on his back insensible, head thrown back, skin cool, respiration nearly natural, pulse feeble, small and slow-65 beats per minute, face pale, pupils contracted, and blood flowing slowly from a small opening just below the right superciliary ridge and just above the ball of the right eye; this opening having been made by a pistol ball shot from a distance of five or six paces. No cerebral substance was apparent at the opening, but on examination of the white hat that he wore at the time he was shot, found white cerebral matter on that portion of the brim which projected over the right eye. I probed the wound for a distance of four inches with a female catheter, the instrument passing without force being used, through the opening in the orbital plate and dura mater made by the ball, and ranging backwards, downwards and gradually towards the left side of the head, producing the impression on my mind that the ball had passed to the back portion of the left hemisphere of the brain. There was partial paralysis of the right arm, leg, and side of the face, without any perceptible paralysis of the tongue. No evidence of the ball being elicited by a moderate effort with the probe, it was deemed prudent by Dr. Malone, who was present, and myself to push our investigation no further. While using the probe he vomited up the dinner he had eaten a few hours before, in a partially digested state, the vomiting was repeated several times during the first six hours after the receipt of the injury. Cold water dressings were applied to the wound and an active cathartic administered, which failing to act, his bowels were thoroughly moved with three drops of croton oil. Used the catheter every ten hours for two days, after which time he voided his urine naturally.

Complete insensibility lasted for twenty-four hours; it existed in a moderate degree for ten days. During first five days after the injury

the pulse ranged from 60 to 75 beats per minute, surface of skin cool, pupils slightly contracted, and respiration nearly normal. On the sixth day, evening of Jan. 18, the pulse ran up to 90 beats per minute, and after that time for several weeks raised from 90 to 135 beats per minute, increasing on the least exertion or excitement and diminishing with rest and quiet. After the sixth day the surface of the skin became warm, attended with thirst which was relieved with ice, little or no complaint of pain of any kind, up to this time. No nourishment was given him for the first three days after the receipt of the wound; from this time on to recovery, he seemed to relish what was given him. His diet consisted in the main of butter and sweet milk, soft boiled eggs, soup and beef tea.

About the 27th Jan., fifteen days after injury, his consciousness was sufficiently restored to recognize friends around him, and to be aware of his being away from home, some four miles distant, in the country, he having been shot while on a visit to his little cousins living in this city. The case progressed very well without anything particularly worthy of note until Monday, 5th Feb., when he had quite a severe rigor, lasting over an hour, followed by febrile reaction, nausea and thirst. right eye, which had been uninjured commenced to inflame the same day and to swell, and was accompanied with pain of a lancinating character referable to the region of the right eye. The swelling around that eye continued to increase; on Monday, the 7th Feb., indistinct fluctuation being detected on careful palpitation above the ball of the eye, and under the seat of the opening made by the entrance of the ball, I introduced the point of bistoury and made an opening one fourth of an inch in extent downwards and outwards. About one ounce of thin pus was discharged, followed by a large quantity of serous fluid, which continued to flow, a few drops at a time, for ten days. Some of this fluid must have been from the cerebral meningies, another portion of it, I think, came from the lacrymal gland which was nicked in making my incision into the abscess.

Saturday, February 10th. Had another rigor which was slighter than the first, followed by increased febrile action; a few hours after, the wound discharged more freely of pus than it had done for two days previous. The pain complained of was referred to a point just over the left eye.

Sunday afternoon, Feb. 11th. Had another rigor, quite slight, referred pain to a point over left eye, followed by increased frequency of pulse and heat of skin. The pain complained of at the time these rigors would come on, was very acute and severe, so much so as to cause him to cry out. They were not persistent and were relieved by inhaling chloro-

form for a few minutes, until morphia could act, which generally gave rapid relief.

Feb, 15th. One and a half A. M., had another slight rigor with headache, followed by increased heat of skin and frequency of pulse.

Feb. 18th. Complained of headache, and threw up his food, which was quite acid, but apparently pretty well digested.

Feb. 20th. Has had no other rigors, pulse range from 86 to 120 beats per minute.

Diet is chiefly butter and sweet milk, toast, soft boiled eggs, soup beef tea, boiled custard, egg nog, and chicken; appetite pretty good.

Feb. 21st, three P. M. Complained of headache, pulse ran up to 120 beats per minute.

Feb. 22d. Comparatively comfortable, pulse 108 per minute, appetite good; continued diet and three grains of quinine every six hours.

Feb. 23d. Appetite good, free from pain, pulse 98, bowels moved naturally. The eye looks much improved, swelling nearly subsided, discharge has ceased and wound closed.

24th. Complains of slight pain over left eye, pulse 98, skin pleasant, appetite good. A few inspirations of chloroform relieved all headache.

25th. Seems a little languid; at 12 M. last night bowels moved naturally, right eye still improving, swelling has subsided so that the eye appears about natural in size. The pupil has been irregular in shape for a few days, without any appearance of discoloration; it is deemed prudent, however, to keep it dilated with a solution of atropium, as iritis is apprehended. The case progressed naturally until March 2d, when it became evident from the dusky appearance of the iris of the right side that iritis was springing up, and also that the cornea was becoming involved. Concluding that the pains from which the patient was suffering were the result of the ophthalmia, all treatment was directed to that organ. The keratitis culminated in ulceration about the centre of the The inflammation of the iris went on to suppuration, producing cornea. hypopyon, the anterior chamber being nearly filled with pus. The inflammatory process in this case was not of an active character, and as there was partial paralysis of that side with a want of perfect sensation. it was deemed imprudent to adopt depressing treatment. The pupil was kept constantly dilated, and a tonic constitutional treatment was resorted to, with nourishing diet, taking the precaution to exclude the light from the eye to a moderate degree; one strong proof that the condition of the eye was due to a want of perfect nervous influence was the absence of photophobia. Under the tonic course of treatment and generous diet the eye and general condition of the patient gradually improved and the paralysis of the right side disappeared.

At this time, June 4th, lacking a few days of being six months from the receipt of the wound, the patient's general condition is good, paralysis nearly entirely disappeared, intellectual faculties perfect; he is running about amusing himself and taking as much interest in his sports as ever. The white speck upon the cornea, the result of the cicatrized ulcer, being in the axis, interfered somewhat with perfect vision. The lids of this eye are still easily inflamed, showing a disposition to the formation of styes, quite a number of which he has suffered from recently. An operation for artificial pupil, after the irritability of the lids passes off, may be necessary to secure more perfect vision. I look upon this case as virtually well, with the ball still remaining in the posterior portion of the left hemisphere of the cerebrum.

Remarks.—The features of interest in this case are the following: That a bail may penetrate the brain for a considerable distance and remain there without producing death. There can be no doubt of the ball having penetrated the brain, for there was cerebral matter found upon the brim of his hat, and the orbital plate was penetrated, with an opening large enough for a female catheter to pass readily through it and then to pass without resistance for four inches through the opening made in the dura mater into the substance of the brain. The strong evidence of the ball being in the left hemisphere and posterior, was that the paralysis was on the same side the ball entered, and he laid for several days with his head thrown back. The cerebellum could hardly have been injured, for there was no paralysis of the tongue, which would have existed. Again there was a considerable flow of the meningeal fluid for some days.

Mr. Guthrie has remarked that while injuries of the base of the brain are of all most fatal, the fatality of the injuries in the upper portion diminishes as you proceed backwards; that is to say, injuries of the anterior portions are the most fatal; injuries of the middle portions less so, and injuries of the posterior portion least of all. It is often wonderful to note the amount of brain substance which may be destroyed in some instances without producing death, and in others, what apparently slight lesions of that organ may result fatally. The first is strikingly illustrated by the case of Gage, occurring in the practice of Dr. Harlow, of Cavendish, Vt., in which a tamping iron three feet seven inches in length, one inch and a quarter in diameter at its largest end, and weighing thirteen pounds and a quarter was shot through his head. In 1860 this man was still alive and well.

During the last four years I have seen six cases live long enough to be brought back to general hospital from the field with balls still remaining in their brains, from the best evidence we could get. In one, the ball (a)

large ball from a Belgian rifle, most probably) entered the right side of the head an inch anterior to and one and a half inches above the right ear. I introduced my finger into the wound and removed some clots of blood with loose spiculæ of bone. A considerable quantity of cerebral matter escaped from the opening, and there was hemiplegia of the right side, though the patient was partially conscious, so much so, as to ask for something to eat when hungry and for water when thirsty. granulated nicely, and at the end of three months was nearly healed, the paralysis was greatly improved as well as the intellectual faculties, and there was apparent evidence of permanent recovery. Unfortunately, I lost sight of the patient about this time, when starting on the Kentucky campaign, and have never been able to hear from him since. In four of the remaining five cases, death took place with the first, four weeks after entering the hospital. The fifth case lived for six months, and then died suddenly from abscess of the brain. In this case the ball was in the centre of the abscess, which was situated about the middle of the left hemisphere of the cerebrum. The abscess contained about an ounce of purulent matter.

There are reports of many cases where great violence has been done the brain and yet recovery taken place, but I have not time or space to mention them. I would refer those feeling an interest in the investigation of this subject to South's Notes, to Chelius' Surgery, and to Eve's Surgical Cases. Trumbull reports a case where a piece of an iron spindle three inches long, remained in a child's brain for eight years before proving fatal, and Larrey mentions the successful extraction of a portion of the blade of a javelin from the brain of a man, after its sojourn there for fourteen years. All authorities are agreed that all foreign bodies should be removed from the brain when practicable, as they will be liable to prove fatal in a shorter or longer period, if permitted to remain. When, however, the effort to remove the foreign body requires much violence to be done to the substance of the brain, it is better to trust to Providence than to make the effort. I have never known of a case where the evidence of the ball penetrating the brain was positive, and still remaining, survive the injury more than eighteen months.— The Medical and Surgical Monthly, Memphis, Tenn.

#### CASTRATION.

DR. DUKA, of the Bengal Army, exhibited a specimen not strictly pathological, but of considerable interest, relating to a state of off-hand Asiatic Surgery as it exists even in our days in Bengal and probably

other parts of our Indian Empire. The specimen in question was the pubic region of an old eunuch, Edoo by name, aged nearly 60 years, who, as the chief of a gang of eunuchs in the districts of Patna and Monghyr, had the duty of enrolling fresh hands into his fraternity by "doing as he was done by," namely, emasculating such young boys of 6 to 8 years of age as he could obtain possession of, and for so doing he was brought to trial in 1860, and sentenced to a long term of imprisonment, during which time he died in the Monghyr gaol, in 1863, whilst Dr. Duka was in Medical charge of it. We were hitherto under the impression that all eunuchs, as in Turkey and Abyssinia, were deprived merely of their testes; this specimen, however, would show that in India a clean sweep is made of the whole scrotum, testes and the penis as well, leaving a longitudinal cicatrix, closely adhering to the bone, with the urethral orifice at the upper end of it. It is very rare indeed that Europeans in the East ever have the opportunity of seeing these "neuter" individuals of our race, except as attendants at Mahomedan courts; still rarer can our brethren in India obtain a chance of making a preparation like this, which it is presumed is unique of its kind. The specimen is now the property of the Museum of St. George's Hospital.—Proceedings of Pathological Society; April 3.

#### USE AND ABUSE OF POULTICES.

The British Medical Journal quotes some excellent remarks of Dr. Richardson, from his lectures delivered at the College of Physicians, on the use and abuse of poultices.

The application of moist heat in the form of poultices to suppurating parts, requires, he thinks, remodelling, in order that it may be placed on a true scientific basis. The common recommendation, "you must put on a poultice," is too often an easy way of doing something about which we were not quite sure, and concerning which it were too much trouble to think long. Mischief is very often done by a poultice, which might well be avoided.

When a part is disposed to suppurate, the first step in the series of changes is an increased flow of blood through the capillary surface, followed by obstruction, and thereupon by an excess of sensible heat derived from the friction that is set up. Then follows transudation of liquor sanguinis into the connective tissue, and its transformation, under the influence of heat, into what is called purulent fluid. When to the part in this state we apply moist heat, we quicken suppuration, mainly by upholding the temperature: at the same time we secure the transference of water from

the moist surface into the fluids of the inflamed part, by which tension of tissues is produced, and in the end yielding of tissue at the weakest point.

When the suppurating surface is circumscribed, the rapid induction of the process may be attended with little injury; but when the surface is large, and when the exuded fluid is thrown into loose structures where it can burrow readily, the practice cannot be good to the extent of the mischief. Hence in the treatment of carbuncle and plegmonous erysipelas, it cannot be sound practice in the early stage to apply moist heat. Experience as well as principle warrants this conclusion. In cases of carbuncle especially, Dr. Richardson has of late avoided the application of moist heat in the early stages with good results.

But when in the course of local disease, suppuration is actively established and is naturally circumscribed; when the increased temperature of the part has fallen to or below the natural temperature—then the value of moist heat comes on with full force. Then the tension which is exerted determines the escape of fluid at the weakest point of the surrounding tissue, and when the fluid escapes, or is liberated by the knife, the escape for a long period is aided by the application of moist heat.

The continued application of moist heat for a long time after the escape of purulent fluid is again indifferent practice. It sustains discharge, it sets up unhealthy decomposition of fluids; it produces a thickened, soddened condition of skin, most favourable to the production of sinus; and it retards recovery. When a surface is freely open and suppurating, dry and not moist heat is the remedy. We are in want in these cases of a simple invention; we require something which we can apply as readily as a poultice, which shall keep up the temperature of the part, and at the same time take up moisture, and gently desicate, without injuring the tissues.

#### TREATMENT OF ANTHRAX.

Dr. Larghi, of Vercelli, describes the form of treatment which during the last twenty years he has pursued with great success in the treatment of anthrax. As soon as he is called to a case—and the sooner the better—he makes a free crucial incision, so as to reach the sound parts at the margin of the tumour, as well as through the depth of its substance, and then proceeds to freely apply the solid nitrate of silver, sticks of which he has ready mounted on an elastic catheter. Every portion of the incised parts, as well as any spontaneous opening that may have taken place, are thus thoroughly cauterized with the nitrate—which, in fact, is thoroughly dissolved, while when the tumour is very deep a

second cylinder is applied. A pultaceous semi-liquid mass results, and on this being removed any points whence blood issues are again cauterized. The edges of the wound are also carefully cauterized. The incisions and cauterizations are rapidly performed, and the pain caused is not durable, while a calm sleep soon supervenes. The tumefaction and pain of the anthrax rapidly subside, and the separation of the eschar is allowed to take place spontaneously, a week solution of nitrate of silver only being thrown into the cavity. Neither erysipelas nor purulent absorption ensues, the fever ceases, and the patient rapidly recovers.—Annali Univ. di Med. and Brit. and For. Med.-Chir. Review.

#### PHYMOSIS.

By John Hamilton, Surgeon to the Richmond Hospital, and to Swift's Hospital for Lunatics.

We often meet, particularly in hospital practice, with cases of acute inflammatory phymosis accompanied by chancre. In those who have the prepuce long, and who contract chancre on the inside of the prepuce, or at the corona, or the frænum, and the chancre inflames, even slightly, from dissipation or other cause, the inflammation extending to the prepuce, effusion of serum and lymph rapidly and readily take place into the loose cellular tissue of the part. The prepuce becomes elongated and inelastic. and phymosis is the result, varying according to the degree of the inflammation. We should not be too hasty to operate in these cases, as both the cause and effect may be removed in many instances by proper treatment. In the young man (Case No. 3) admitted into No. 8 ward, January last, the case was of this kind, phymosis, not of great size, nor very acutely inflamed. He had had chancres for a fortnight, and had been able to draw back the foreskin; but could not do so for the last two days. There was profuse yellow discharge from under the foreskin, and when it was drawn a little back the edge of a chancre could be seen at the orifice of the urethra. Chancres could be felt over the situation of the frænum, through the phymosed foreskin; they were indurated. Mercury to slight salivation, and injection of water and black-wash completely removed the phymosis and cured the chances, and this treatment will usually succeed. I recollect, some years since, seeing a case of acute inflammatory phymosis with Dr. Gorman of Henry-street. The penis was swelled; the prepuce elongated and curled at the end and edematous, but not very red. It was painful and very tender. A flat induration could be felt through the prepuce where the tenderness was the greatest, no doubt the seat of the chancre which he had contracted three weeks

before; there was not much discharge; by the use of the local means already described, and slight salivation, he was completely cured.

The following is a well-marked example:-

Patrick Ward, a healthy looking man, was admitted October 6, 1863, with inflammatory phymosis: the prepuce dull red, swollen, elongated, painful, and exquisitely tender, with profuse discharge of thin brownish purulent matter. The prepuce could scarcely be drawn back enough to expose the orifice of the urethra, from which there was no discharge. Through the prepuce at the out-side of the base on the right side a hardness could be felt, and the tenderness was so great that he could scarcely bear it to be examined. A chance was diagnosed in this situation.

He was ordered five grains of grey powder three times a day, and to inject three or four times in the day cold water followed by black-wash. Under this treatment a gradual improvement took place; but immediately his mouth became sore; at the end of a week a most marked change for the better ensued: the redness and swelling nearly disappeared, and the discharge which, though changed to healthy yellow pus, had hitherto been profuse, became gradually diminished. Omit the pills, but continue injections. He left the hospital at the end of the fourth week. For a few days before leaving he could draw back the foreskin entirely so as to show the ulcers. There were five or six of small size in the granular stage and just healed. One of the largest was at the right side of the corona glandis, and was the one which had been felt, in the beginning, through the prepuce. I touched them freely with the solid nitrate of silver and told him to take one of the pills at bed time for another week.

I could multiply such cases, but enough has been said to prove that we should not be too hasty to operate, as rest in bed, purgatives when required, the use of injections of water, followed by those of black-wash, or solutions of sulphate of zinc, putting a probe armed with lint and wet with a strong solution of nitrate of silver under the prepuce at the site of chancre, and applying it decidedly to it; but, above all, the use of mercury to slight salivation, will prevent the necessity of operation, by curing the inflammation, and the cause on which it depends.

Where, however, the patient could not previously draw back the prepuce at all, or with much difficulty, before he got the chancre, it is better to operate even in these cases.

But if a case presents itself to you where the inflammatory symptoms are more intense, the penis greatly swelled, the swelling of columnar or pyriform shape, the lesser end at the pubes, the larger below, of a deep dull red colour, rather firm to the feel, exquisitely tender, so that the patient, not only cannot bear the slightest examination, but hollows his body in to

avoid the contact of the clothes; and where, when he attempts to draw back the foreskin, there is a gush, first of yellow, then of thin oily-looking feetid discharge which discharge is profuse, saturating the dressings which are around the penis; where the pain is great, the fever high, quick pulse, hot skin, loaded yellowish tongue, with red tip and edges, and sleepless nights-you have to deal with a phagedenic sore, the cause of the phymosis, and hidden by it, the sooner you perform the operation the better. You give exit to pus and sloughs, expose the chancre, and are enabled to use the proper local applications. Should you delay, Nature will anticipate you by more or less sloughing of the prepuce, or by perforation of it. The operation in such a case is most simple; you introduce a director under the prepuce, and passing a sharp bistoury along it, slit up the prepuce down to the corona. The same may be accomplished without the director, by blunting the sharp end of the bistoury with a small ball of wax, which probed instrument is passed flat between the prepuce and glans, to the lowest point; it is then turned with the edge of the bistoury towards the prepuce, which is rapidly divided by pushing the sharp end through the ball of wax and prepuce. Petit was the inventor of the latter method. Some prefer dividing the prepuce along the centre of the dorsum; others, thinking that a pendulous flap is left by this operation prefer the one recommended by Celsus, of dividing the foreskin below by the side of the frænum. Where you have the choice, the latter is preferable. As the parts are consolidated by the effusion of lymph, the skin, after the division, does not retract from the lining membrane, as when the case is one of non-inflammatory phymosis, but the surface bleeds very freely. At each side at the angles of the cut corona, and at the end of the prepuce, small arteries can be seen to furnish a rapid flow of Usually this can be restrained by small compress of lint, and when not, a needle armed with a ligature should be passed through at the bleeding vessel and tied over it. The surface of the incisions looks pale and ædematous at first, and as the inflamed prepuce is rigid, it cannot always be retracted sufficiently, immediately after the operation, to expose the sore entirely. It is, however, not absolutely necessary, as the bleeding and the free escape of sloughs, if there are any, or of the confined matter which there is almost always in the sulcus of the corona, give great ease, and much benefit the chancre.

On the third day the cut surface will be covered with a greenish exudation, and when this is thrown off it granulates and heals pretty quickly, unless it has become innoculated with the syphilitic virus, and becomes chancerous. This, I am happy to say, is rare. A bread-and-water pouttice for a day or two is most useful, afterwards water dressing with lint is

more convenient. Sometimes the mere operation of dividing the prepuce by letting out the pent-up sloughs and matter, removing constriction, and also, probably, by the local bleeding, arrests the phagedenic action, and the sore afterwards rapidly improves and yields readily to treatment. A man of the name of Tyrrell, 19 years of age, and a tectotaller, was admitted into No. 1 ward, some years ago, with acute phymosis of a deep red colour, edematous, very tender, and with oily shreddy discharge from a phagedenic chancre within; he suffered great pain. There was a chain of slightly enlarged glands in both groins, but no indication of bubo. A fortnight before he had connexion, four or five days after he perceived a chancre; the phymosis came on almost immediately after. The prepuce was divided by the side of the frænum; the bleeding not profuse and stopped by lint; no ligature; the edges of the wound did not separate, being matted together by lymph.

The next day at the inside of the prepuce on each side, extensive phagedenic ulceration, was observed, the incision having gone through the middle of the ulcer. He was put on calomel and opium. On the 4th day the phagedenic action was stopped. On the sixth day the mouth was sore; the chancre remarkably improved, and afterwards the process of healing was most rapid. The only local application was black-wash.

In these cases of phymosis with phagedena you should ascertain, and usually it is not difficult, the situation of the chancre. You will find at one part of the prepuce greater induration and greater tenderness; the patient also will tell you that this was where he first perceived the disease. When the case has existed some days without treatment, and its progress is very acute, a dusky spot, the indication of mortification, will lead you to where perforation is at hand. The plate, from the Museum of the Richmond Hospital, shows this well, as also the remarkable elongation and distortion of the penis in severe cases.

Allow me to mention a case in point of the care with which you should seek for the seat of the chancre. A man was admitted in to No. I ward with inflammatory phymosis and phagedena. There was evidently no time to be lost, the symptoms ran so high. I therefore slit up the prepuce by the inferior incision by the side of frænum. Next day a dusky spot appeared at the upper surface of the prepuce near the corona. I knew if I left this a perforation would take place, to anticipate which, I slit up the prepuce along its upper surface through the dusky spot, which was exactly over a phagedenic chancre. Finding, however, after this operation that there were ugly pendulous flaps on each side, I cut them off, and thus, as it were, in three operations, performed circumcision. No doubt if I had been less in a hurry, and taken time to ascertain the seat

of the chancre, and made my incision through the upper surface of the prepuce, the one operation would have sufficed.

DISLOCATION OF THE HUMERUS ON THE DORSUM OF THE SCA-PULA.—An instance of this rare form of dislocation is recorded by Dr. John Hamilton. On March 23rd, he was asked to visit a gentleman at Rathgar, who had had a fall from his horse. He found a strong muscular man, about 38 years of age, lying on his back in bed, supporting the left forearm with his right hand. A glance at the left shoulder led to the conclusion, that the shoulder was dislocated, but the deformity was not that of the dislocation downward into the axilla, or that forward under the clavicle. The acromion appeared prominent, with a flatness below it, as in those dislocations; but this was only in front, it was full behind, constituting a prominence. The elbow, too, was close to the side, and the axis of the humerus went upwards and outwards, external to the situation of the glenoid cavity. The anterior wall of the axillat formed by the great pectoral muscle. looked flaccid, and felt quite soft and relaxed, and the fingers could be readily passed under the acromion into the vacant space left by the departure of the head of the humerus from the glenoid cavity. The most convincing proof, however, of the nature of the dislocation was the head of the humerus forming a round tumour on the back of the scapula below the spine. Its shape could readily be felt, and the motions of circumduction or rotation given to the arm perceived to be communicated to it. The reduction was easy. As the patient lay on his back, Dr. Hamilton seized the wrist, and with his heel in the axilla, drew steadily downwards and outwards and then inwards towards the centre line of the body. The head of the bone slipped into its socket with an audible snap in less than a minute. was placed in the axilla in this case, not as in the dislocation downwards. to be a fulcrum on which the humerus acts as a lever, or to push the head of the humerus towards the glenoid cavity, but simply as a counterextending force. (Medical Press and Circular, March 11th.)

# Medicine.

CASE OF GASTRIC ULCER TREATED BY HYPODERMIC INJECTION— RECOVERY.

By George Willis, M. D.

Seeing in one of the Medical papers that a committee is formed in London to investigate the uses of hypodermic injections, and also meeting by accident last week on the West Midland Railway an engine-driver who, I think, may be safely said to owe his life to this means of treatment, I am induced to give my notes of the case and the result.

Six years ago C. L., then aged 50, stated to me he had suffered all his life at times from dyspepsia, which was always relieved by a little suitable treatment; that he had never been confined to his bed until January 7 of that year for a single day. On that day he was seized with terrible pain in the stomach and vomiting, which state of things lasted for three months, and kept him in bed.

In the March following he had a hæmorrhage from the stomach of about two quarts, and for fourteen days after this he was treated by beeftea and wine injections. On April 23, I first saw the case, which I at once recognized as one of gastric ulcer. So great was the irritability of the stomach at that time, and so acute the agony, that not even milk and lime water in the smallest quantities could be borne or retained. I tried large doses of opium, creosote, bismuth, glycerine, kino, etc.—all were rejected almost as soon as swallowed.

In this state he was seen in consultation by Dr. William Willis (late of the Middlesex Hospital, but now in Japan), and it was decided to use morphia hypodermically, to soothe his transit from this world rather than in the hope of cure. He had beef-tea injections, with eggs and brandy; the morphia injection eased his pain and induced sleep.

A trial was now made at the end of a week of a little milk, and it was found that a cupful would keep down and not cause very great pain if preceded by the morphia injection, which was of a strength equivalent to three grains of the salt.

This treatment was continued daily for above a year, and the diet was bread, milk, gruel, and occasionally a little fish. At the end of a year the man left his bed and came daily to our Dispensary for his treatment, which was now reduced to two grains; so cadaverous was his aspect, that people turned round in the street to look at the almost corpse-like man feebly moving along. He used to say, in his Staffordshire accent, when holding out his skinny fore-arm for the injection, "I am like a babby wanting his mammy."

At this time he began the use of beef-tea and mutton-broth, but the pain and vomiting invariably returned if by any chance the injection was unduly delayed. For another year he gradually improved in health—his digestion became better. At the end of this year the daily hypodermic injection was only the equivalent of one grain morphia, and six months later he was able to do without it altogether, but took especial care in his diet. He had so far recovered in strength, looks, and flesh, that a

few months afterwards he got employment at his old work, and reported of himself the other day that he had enjoyed perfect health for more than three years; that he could eat any sort of food and in full quantities; usually ate beef twice a day, and took two or three pints of beer. He has grown very ruddy and stout, weighing nearly twelve stones, though when he left his bed he hardly weighed eight.

The only medicine taken by the mouth during his illness was a dose of salts and magnesia once a week, for without this his bowels never acted. On a few occasions an injection of atropine was substituted for the morphia in a moderately large dose, and then it never relieved pain. On one occasion the fourth of a grain produced very alarming symptoms, and was never repeated. During twenty years I never saw a more satisfactory case or one that brought more credit to treatment, and I only hope that such a valuable mitigation of suffering may never fall into disuse. I may add that it is now the only solace of a man dying of cancer of the rectum, and he requires six grains of morphia daily.—Medical Times and Gazette.

# RULES FOR THE TREATMENT OF EPIDEMIC DIARRHŒA AND CHOLERA.

By George Johnson, M.D., F.R.C.P., Physician to King's College Hospital; Professor of Medicine in King's College, &c.

The following directions for the treatment of diarrhæa and cholera are given in compliance with the wish, which has frequently been expressed, that I would set forth somewhat more in detail than I have hitherto done what, in my opinion, it is right to do, and what to avoid doing, in the treatment of these diseases. In giving these directions, I shall carefully endeavour to act upon the golden rule which should always guide us in the treatment of disease—Ne quid nimis.

Diarrhœa during an epidemic season is in many, but not in all instances, an early stage or a mild form of cholera; and in the great majority of cases of actual cholera, an attack of bilious diarrhœa marks the onset of the disease. A diarrhœa, when it is not the actual beginning of cholera, will weaken the patient, and so may predispose him to suffer from the more serious form of disease. Diarrhæa, therefore, ought not to be neglected even for an hour. That plan of treatment for diarrhæa is obvil ously the best which most speedily and completely puts a stop to the disease, without subsequent ill effects.

It may be stated as a general proposition, that the immediate cause of diarrhœa or looseness of the bowels is the presence of offending materials in the alimentary canal. These offending materials are of various

kinds in different classes of cases. In one case, unwholesome and undigested food is the exciting cause of the purging; in another case, a large and unnatural accumulation of the fæculent contents of the bowel; while in another class of cases, offending materials are poured from the the blood into the bowel, in consequence of the action of a morbid poison upon some of the ingredients of the blood. To this last class of cases belongs what is called choleraic diarrhwa.

The most rational theory of choleraic diarrhea is, that a morbid poison enters the blood, either with the air through the lungs, or with the food and drink through the alimentary canal; and that this poison excites certain changes in the blood, in consequence of which some blood materials are spoiled, and thus rendered not only useless, but noxious. These morbidly changed blood-materials are then discharged from the blood-vessels through the mucous membrane of the stomach and bowels, and are ultimately ejected by vomiting and purging.

Various as are the remote and primary causes of diarrhea, this one condition is common to all classes of cases; viz., that the contents of the bowel are unnatural and offensive. These offending materials are the immediate cause of the purging; and they must be expelled from the bowel before the diarrhea can come to an end.\*

From the above considerations we deduce one important and guiding rule of treatment, which is this—not to attempt by opiates, or by other directly repressive means, to arrest a diarrhea while there is reason to believe that the bowel contains a considerable amount of morbid and offensive materials. It is certain that these offending materials must be cast out from the bowel before the diarrhea can permanently cease. The effect of an opiate at this stage is to prolong the disease, and to increase the risk of mischief from the retention and reabsorption of the morbid contents of the bowel. If the opiate have the effect of retaining within the blood-vessels some of the morbidly changed blood-constituents, this astringent action will probably be more injurious and even deadly than the retention of morbid secretions within the bowel.

The purging is the natural way of getting rid of the irritant cause. We may favor the recovery by directing the patient to drink copiously any simple diluent liquid—water cold or tepid, toast-water, barley-water, cr weak tea; and we may often accelerate the recovery by sweeping out the alimentary canal by some safe purgative, and then, if necessary, soothing it by an opiate. Castor-oil, notwithstanding its unpleasant taste, is, on the whole, the safest and the best purgative for this purpose. It has the advantage of being very mild and unirritating, yet withal very quick in its action. A tablespoonful of the oil may be taken, floating on

cold water or any other simple liquid which may be preferred by the patient. A mixture of orange-juice or of lemon-juice with water forms an agrecable vehicle for the oil. If the dose be vomited, it should be repeated immediately; and the patient should lie still, and take no more liquid for half an hour, by which time the oil will have passed from the stomach into the bowels. Within an hour or two, the oil will nsually have acted freely. Then a tablespoonful of brandy may be taken in some thin arrowroot or gruel; and, if there be much feeling of irritation, with a sense of sinking, from five to ten drops of laudanum may be given in cold water. These means will suffice for the speedy cure of most cases of choleraic diarrhoa. If the patient have an insuperable objection to castor-oil, or if the oil cannot be retained on the stomach, ten or fifteen grains of powdered rhubarb, or a tablespoonful of the tineture of rhubarb, or a teaspoonful of Gregory's powder, may be substituted for the oil.

If the diarrhea have continued for some hours, the stools having been copious and liquid; if there be no griping pain in the bowels, no feeling or appearance of distension of the intestines; the abdomen being flaceid and empty, and the tongue clean—we may conclude that the morbid agent has already purged itself away. There will, therefore, be no need for the castor-oil or other laxative, and we may immediately give the brandy in arrowroot, and the laudanum, as before directed. The rule in all cases is, not to give the opiate until the morbid poison and its products have for the most part escaped; not to close the door until "the enemy" has been expelled. While there are some cases in which the evacuant dose is not required even at the commencement of the attack, there are many more in which the opiate is unnecessary in the later stage. In some cases of severe and prolonged diarrhea, it may be necessary to repeat the oil and the laudanum alternately more than once, at intervals of three or four hours. Practical skill and tact are required to discriminate these cases.

If the diarrhoea be associated with vomiting, this should be encouraged and assisted by copious draughts of tepid water. The vomiting affords relief partly by the stimulus which it gives to the circulation, but mainly by the speedy ejection of morbid secretions.

Thirst may be allayed by drinking cold water, which may be acidulated by the addition of lemon-juice or a few drops of dilute sulphuric acid. Care should be taken that the water for drinking is pure. Organic impurities, such as result from the admixture of sewage, are especially to be dreaded. If the water be of doubtful purity, it should be carefully filtered through sand and charcoal, and then boiled. Impure water is a common exciting cause of cholera.

While the diarrhoa continues, the diet should consist mainly of rice or arrowroot, gruel or broth.

In all cases of severe diarrhea, the patient should remain in bed.

If the purging continue, if the stools become colourless and watery (the purging being of the kind commonly called rice-water purging), and if the surface of the body become cold and blue, the disease is now passing, or has actually passed into the stage of collapse.

This state of choleraic collapse results from a peculiar arrest of the flow of blood through the lungs, occasioned by a morbid poison. It is not a condition of mere exhaustion. It is not relieved by the remedies for exhaustion; and it is made worse by opiates and by spirituous stimulants, which must, therefore, be avoided. The patient should be strictly kept in the recumbent position; he should be allowed to drink pure water freely, and should be abundantly supplied with fresh air. Hot flannels, or bottles, or bags of sand, should be applied to the feet and legs.

Cramps may be relieved by rubbing the affected parts with the warm hand.

Hot baths, whether of water or of air, have been found to be, on the whole, more distressing and exhausting than beneficial.

Five grains of sesquicarbonate of ammonia, or a teaspoonful of spirit of sal volatile, may be given in an ounce of camphor mixture every two or three hours as a diffusible stimulant.

The discharges from the bowels, and the condition of the abdomen, should be carefully observed. The discharges always continue, more or less, during the stage of collapse and until reaction has set in. One of the earliest and surest signs of reaction is the reappearance of bile in the vomited matters and in the stool. When vomiting and purging entirely cease during the stage of collapse, the disease is nearly always fatal.

One of the main objects of treatment during this stage is to facilitate the escape of the morbid secretions from the alimentary canal. This may be done partly by the copious use of diluent drinks, and partly by an occasional dose of castor-oil. If we carefully observe the condition of a patient in collapse, we shall often find that the intestines are more or less distended with liquid, and this, too, while perhaps there is general torpor and little or no effort at expulsion. Again, it has often been found that, although there has been copious watery purging during ife the small intestines contain after death a large amount of a peculiar viscid dirty white material, having a very offensive odour. An occasional dose of castor-oil—a tablespoonful every three or four hours during the stage of collapse—may be useful in removing both these conditions; namely over-distention of the bowel by liquid, and accumulation and retention of offensive viscid semi-solid secretions.

The object and the effect of this treatment is not to increase the amount of liquid which is poured from the blood into the stomach and bowels, but simply to assist and to quicken the expulsion of the morbid secretions from the alimentary canal.

After reaction has occured, an occasional laxative dose is required—about once in the twenty-four hours during the first two or three days.

It is worse than useless to attempt to feed a patient during collapse. The secretions of the stomach are utterly deranged; and the power of digestion is suspended. The mildest nourishment administered at this time only adds to the feeling of oppression and general distress, from which the act of vomiting often gives immediate relief.

After reaction has occurred, and when the normal secretions are restored, the mildest nourishment should be given frequently, but in small quantities—such as milk, gruel, or rice, or arrow-root with a small quantity of brandy, soup or beef-tea or chicken-broth. After an attack of cholera, the stomach is sometimes long in recovering its tone and the power to digest solid food. When this is the case, a grain of quinine, with ten or fifteen drops of dilute hydrochloric or sulphuric acid and an equal quantity of chloric ether, may be taken with each meal. The same combination, too, often relieves that distressing sense of uneasiness, with flatulence in the stomach and bowels, experienced by many persons who are not otherwise ill during an epidemic of cholera.

Venesection has often afforded great relief during the stage of collapse. The symptom which appears especially to call for this remedy is rapid breathing, with a feeling of impending suffocation. When, with these symptoms, there is a cessation of vomiting and purging, which is probably a result of the almost entire arrest of the circulation through the lungs, I believe that venesection affords the only hope of saving life. It is difficult to obtain a stream of blood in these cases; not, as many suppose, because the blood is too thick to flow, but because, in consequence of the block in the lungs, the blood in the veins is nearly stagnant. The bleeding appears to be beneficial, partly by relaxing spasm and partly by lessening the distension of the right cavities of the heart, and so increasing their contractile power. Repeated doses of ammonia may help to quicken the circulation.

Consecutive Fever. Reaction from collapse is sometimes followed by a febrile condition—a hot skin, quick pulse, coated tongue, hurricd breathing, often a scanty secretion or even a complete suppression of urine, with drowsiness tending to pass into coma. These unfavourable symptoms are more common when, during the earlier stages of the disease, opium and alcoholic stimulants have been freely given; but they may occur when no such means have been employed.

The best treatment consists in a scanty diet without alcohol, copious diluent drinks, with saline effervescing draughts, an occasional aperient, castor-oil, or sulphate of magnesia or a seidlitz powder; counter irritation over the lungs and kidneys, and sometimes local bleeding to relieve congestion of those organs.

In some cases, there is complaint of pain in the region of the stomach during convalescence. This may be relieved by the application of a few leeches over the seat of pain. If, after reaction, the stomach remain irritable, with frequent vomiting, iced water is an agreeable and efficacious remedy.

Preventive Measures. The choleraic discharges from the bowels should be looked on as highly poisonous, and they should be disinfected and got rid of as soon as possible. Every vessel and article of clothing or bedding soiled by the discharges should be carefully cleansed and disinfected. The attendants on the sick should be warned of the necessity for extreme personal cleanliness. The hands should be frequently cleansed with the aid of disinfectants, and always immediately before taking food.

The chief disinfectants are—chloride of lime, Burnett's liquid, Condy's liquid, and a solution of carbolic acid. The medical attendant should give directions for the use of these agents. Condy's fluid is well adapted for cleansing the mouth and hands before taking food; and carbolic acid for cleansing bedding and clothing, which would be damaged by mineral disinfectants.

Great moderation both in food and in drink is essential for safety during an epidemic of cholera. A single act of indiscretion has been followed by a severe attack. Intemperance at such a time is fraught with extreme danger.

Unwholesome articles of food, more especially tainted meat and fish and decayed vegetables, are to be carefully avoided. Ripe fruit and fresh vegetables may be taken in moderation with safety and advantage.

Especial attention should be paid to ensure the cleanliness and thorough ventilation of dwelling-houses. All vegetable and animal refuse should be removed as speedily as possible. Care should be taken to prevent the escape of sewer gases into the interior of dwellings.

The purity of the water employed for drinking and cooking should be most carefully provided for. A few drops of Condy's fluid may be used as a test for the purity of water. Organic impurities soon decolorise the fluid; which is not only a test, but also a purifying agent by oxidising the organic impurities.

No unnecessary medicines of any kind should be taken. When opening medicine is required, the mildest should be selected, such as castor-

oil or rhubarb. Saline purgatives, such as Glauber's salts and Epsom salts, are objectionable, on account of their tendency to cause profuse watery purging. The common belief that prolonged costiveness should not be interfered with during the prevalence of cholera is an error. An accumulation of offensive materials within the bowel may be itself a source of irritation and of danger. I repeat, however, that no unnecessary medicine of any kind should be taken, and, as a rule, none without medical advice.—British Medical Journal, July 21.

## WHOOPING COUGH CURED BY HYPODERMIC INJECTIONS.

(Under the care of Dr. BIEGEL.)

Ann Wilson, three years old, began to cough at the beginning of January, 1866, the cough becoming more and more intense until it ended in severe whooping-cough. Admitted to hospital January 21. She is worse at night, and attacks are so frequent that she has little rest. Each attack ends in vomiting a quantity of slime. She is a well-built child, chest fully developed. On right side some rales, but nothing else abnormal on auscultation and percussion. Appetite fair; bowels rather costive; one-twelfth of a grain of acetate of morphia by subcutaneous injection. The mother had not left the consulting-room many minutes when she returned very much alarmed, because the child seemed "lifeless;" it was soundly sleeping. In the evening the mother's fears became more urgent, because the child did not wake, but she reported that it breathed easily. Advised to let it sleep without disturbance.

27th: Slept after last injection eight hours; cough, extremely light; about three times during the night; no vomiting after the cough; appetite much better- From this time the child recovered.

Out of five cases of ague successfully treated by the hypodermic method, we report the following:

Harriet Franklin, æt. 30, married, never before ill. In August, 1865, went with her husband to Haverston, and there was attacked with fever, called by the doctor in the town marsh fever. It had a tertian type and lasted three weeks, but yielded to the use of quinine. In the following September it returned, but was quartan; lasted two months, and was again stopped by quinine. The patient remained well up to January 14th, 1866, when the attack again seized her. Returns every day at noon, beginning with pain in the spinal column, followed by very intense shiverings which are succeeded by great heat, and this in turn by profuse perspiration. The fit occupied about two hours.

17th: Admitted out-patient, pale and ill-nourished; she is now in the

febrile paroxysm; respiration accelerated; pulse 128; spleen much enlarged; injected a quarter of a grain of acetate of morphia.

18th: Sick nearly the whole night; attack at noon as usual; injection

repeated.

19th: Attack occurred at eleven o'clock to-day, but was much slighter; slept much better the previous nights. injection repeated.
21st: Attack recurred early in the morning, but was very slight;

injection repeated. From this time there was no recurrence of the attacks. -Medical Press and Circular.

#### THERAPEUTIC NOTES.

Capsicum in Delirium Tremens .- Since our last notice of the employment of this simple and efficacious plan of treatment, some well-marked cases have occurred in Dr. Lyon's practice. In one instance the patient, a tavern-waiter, of chronically intemperate habits, was admitted to the Whitworth Hospital in the first stage of this morbid condition. The patient exhibited tremor in almost all the muscles of the body, chilliness, debility, sleeplessness, foul tongue, severe and general uneasiness, but there was a total absence of illusions, horrors, or delirium to any degree. He got a single dose of capsicum, twenty grains in a bolus, after which he slept and fully convalesced, the disease having been thus peremptorily cut short. Dr. Lyons remarks on the great importance of this early phase of the disease being recognized and promptly treated. The patient is in that condition in which he may be by but slight further indiscretion plunged suddenly into all the horrors and moral degradation of the state of fully developed delirium tremens, with all its consequent loss of character with others, and loss to the patient himself of that last barrier against utter abandonment, the sense of shame and remorse. For not alone does the first occurrence of delirium tremens brand the sufferer with the character of an all but irretrievable dipsomaniae, but the fact that he has passed this moral rubicon, in the vast majority of cases, deprives the patient of all stimulus to self-control, and under the demoralizing feeling that there is nothing further to be risked, his steps henceforward ever tend downwards and from bad lead on to worse.

As Dr. Lyons observes, a brief but variable period often precedes the fully developed attack of delirium tremens, especially in first cases, in which the patient presents anomalous symptoms urintelligible to himself, and not always read aright by his attendant. This stage is in some patients marked by the occurrence of tremor, sleeplessness, and general distress and anxiety, without a trace of delirium. In other instances slight illusions prevail without tremor, from which the patient can by an effort arouse himself, and under strong self-directed exertion of the will even command his faculties for a time, and pursue avocations of business, to break down, it may be, hopelessly, a few hours subsequently, if his condition is neglected, misunderstood, or mistreated. Under these circumstances the treatment by capsicum comes in very opportunely, and by its employment we may, as in the case just cited, cut short the disease. and so save the patient from the consequences of his imprudence, and possibly restore him to a reformed life. Another case well illustrates the success of this drug when opium had completely failed to alleviate the symptoms, and seemed on the contrary in many respects to aggravate the The case was that of an individual who had taken patient's condition. six grains of opium within a period of two or three days without sleep being procured, or any relief to the illusions, tremor, and distress under which the patient laboured. After a twenty-grain dose of capsicum in bolus, profound and refreshing sleep for twelve hours was induced, and the patient awoke conscious and restored. In an almost precisely similar instance occurring about the same period, a thirty-grain dose of the drug had to be given a second time before full relief was procured. In one or two instances of individuals of confirmed and extremely intemperate habits it was found necessary to repeat the dose some three or four times.

As to the physiological action of the remedy, Dr. Lyon's explanation is that already given in a former communication—namely, that it produces a powerful stimulant and sedative influence by its direct action on the gastric filaments of the vagi. Slight uneasiness in the stomach has been complained of in one instance only after its use, and in two instances somewhat smart purgation was noticed, but without any evidence of intestinal or other irritation.

As at present employed, the drug is administered in bolus made up with honey of roses; but Dr. Lyons suggests the feasibility of its being conveyed to the stomach in the more agreeable form of a capsule.

As capsicum belongs to the great order of the Solanaceæ, Dr. Lyons suggests the possibility of its containing a narcotic principle hitherto undiscovered. He has referred this question for further elucidation to his distinguished friend, Mons. Gages, curator of the Museum of Irish Industry, a chemist of great eminence.

Christison observes, "Capsicum and cayenne pepper belong to the class of irritant poisons; and the latter preparation has been known to cause death. It is entirely destitute of narcotic properties, so far as is known at present. In both respects it constitutes a singular anomaly in the

natural order Solanaceæ, which are generally power of narcotics, but feebly or not at all acrid."

Pepper (Piperaceæ), probably black pepper, was not unknown to the ancients medicinally. Celsus, it may be mentioned, has a chapter headed: "Curatio horroris in febribus. Si nec balneum quidem profecit, ante accessiornem allium edat aut bibat calidan aquan cum pipere, siquidem ea quoque assumpta calorem movent qui horrorem non admittunt." Dioscorides also alludes distinctly to the use of pepper in curing the shiver of fever, and in later times Van Swieten and Louis Frank have employed it for a like purpose. Under the form of piperin the active principle of black pepper has been by many practitioners in the present century prescribed in the treatment of fevers, some vaunting its efficacy as not second to that of quinine.

Cholorate of Quinia.—This newly-discovered salt, which the profession owes to Dr. Lyons, continues to be employed in his Clinique and in his private practice, we are informed, with most satisfactory results. In cases of scarlatina, typhus, all low pyrexial states, local inflammations, &c., the use of this drug is indicated, and so far as opportunities have yet been afforded for testing its efficacy, the results are reported to be highly favourable. From its chemical constitution and the large amount of avaliable oxygen which is thrown into the system when this medicine is ordered, according to the formula recently furnished\*, in solution with perchloric seid, valuable therapeutic effects may be anticipated a priori. The tonic alkaloid conveyed into the economy at the same time is a very important substitute for the potash in the ordinary salt hitherto employed (chlorate of potash). Dr. Lyons awaits an opportunity of testing the value of the chlorate of quinia in that malady in which, above all others, chlorate of potash has attained, according to Trousseau and Pidoux, its most important and indisputable triumph—namely, gangrenous stomatitis. while he invites the co-operation of his professional brethren in testing the value of this hitherto unused salt.

Syrup of the Phosphates of Iron, Quinine, and Strychnia.—Dr. Lyons has for some time past employed with, he conceives, very important therapeutic results, this powerful tonic combination, for which the profession is mainly indebted to the late Dr. Easton of Glasgow, and Professor Aitken of the Royal Victoria Hospital, Netley.

The concentrated syrup of the phosphates, when made by double decomposition, according to Professor Aitken's formula, contains per drachm two grains of the phosphate of iron, one grain of the phosphate of quinine,

<sup>\*</sup> See Medical Press and Circular, May 30, 1866.

and one thirty-second of a grain of the phosphate of strychnia. perfectly clear and limpid fluid, slightly refracting light with the peculiar tint of the quinine solutions, and, viewed in mass, obliquely showing the bluish tint of the phosphate of iron held in solution. It is perfectly miscible with distilled water, has a strong styptic and distinctly chalybeate taste, and an after taste of quinine. It may be exhibited in doses of twenty to forty, and even sixty minims, diluted with water, according to age and the circumstances of the case. It is well borne in the majority of cases; it acts as an invigorating stomachic and sensibly improves appetite; it is an admirable general tonic; it appears to be a readily assimilable chalybeate, and is thus well adapted for certain chlorotic and anæmic states. In the morbid states of the nervous system which precede and accompany the development of the strumous diathesis, the influence of the strychnine salt appears to be exercised with great potency as a nervine tonic and stimulant. and it would seem to be an important agent in altering the morbid state of the nervous apparatus which presides over the function of nutrient assimilation. Physiologically, this influence may be supposed to be attributable to the well-known action of the strychnine salts on the spinal cord. as well as by direct stimulus to the filaments of the great sympathetic plexuses distributed to the stomach and intestines. From the general tenic and invigorating effect of this drug, its influence on the stomach and the promotion of appetite, as well as by the improved assimilation of food which it induces, it is a very valuable medicine in cases of strumous children threatened with scrofulous degeneration and ultimately with localized tubercular development. As a preparative to the use of codliver oil, and in certain cases as a concomitant to this food-substitute, the syrup of the three phosphates will be found a very important adjunct in the treatment of numerous forms of strumous disease.

But the employment of this admirable combination is not limited to the cases just mentioned. In depressed state of the system in the adult and aged, in several of the conditions tending to adipose degeneration of important organs, such as the heart and kidneys, the syrup of the phosphates will be found a serviceable and reliable remedy. Where it is desired to combine a tonic and styptic to aid in checking the drain of albumen from the system in chronic disease of the kidneys, this combination will be found of great use.

In many forms of cutaneous diseases where a tonic effect is desired, this combination will be employed with benefit.

For the use of strychnia in chorea and certain other of the maladies of children, the high authority of Trousseau and Pidoux may be cited. These distinguished authors give the following formula for the prepara-

tion of a syrup of strychnia. Five centigrammes of the sulphate of strychnia are dissolved in one hundred grammes of simple syrup. One hundred grammes contain about twenty-five cuillerées a café or teaspoonful; each teaspoonful or drachm contains two milligrammes or one twenty-fifth of a grain of the sulphate of strychnia. Dr. Lyons is of opinion that a superior efficacy will be found to attach to the triple combination above described. His best thanks are tendered to the Army Medical authorities in this city, by whose kindness Serjeant Moss of the Army Medical Stores, himself an experienced practical chemist, and who had learned the process under Dr. Aitken's supervision, has been allowed to prepare for him a specimen of the syrup of the phosphates of iron, quinine, and strychnia in exact accordance with Professor Aitken's directions.

REPORTS ON ORIGINAL RESEARCHES IN SCIENTIFIC PRACTICAL MEDICINE.

By Benj. W. Richardson, M.A., M.D., F.R.C. P., Senior Physician to the Royal Infirmary for Diseases of the Chest.

II.—On some new Compounds of Ether.

III.—Styptic or Hæmostatic Ether.

My researches on the production of local anæsthesia by means of ether spray have led me to invent a few new compounds of ether which cannot, I think, but prove useful in practice.

### HAMOSTATIC ETHERS.

In observing the influence of the cold produced by the dispersion of absolute ether during operations, nothing has struck me more than the effect of the cold in immediately stopping the flow of blood. For a time, cold alone, when carried to its fullest degree, prevents all venous and capillary homorrhage, and even the homorrhage from small arterial trunks. After a time, however, as reaction returns, and the vessels relax under the influence of heat derived from the renewed circulation, there is bleeding, which, if a wound be closed too quickly, is a cause of after trouble. The observation of the immediate effects of cold-led me to think that if they could be supplemented by a styptic which would spray evenly with ether, and which would take up the constringing action when the vessels commenced to relax, an important desideratum in both Medical and Surgical practice would be supplied.

# XYLO-STYPTIC ETHER SPRAY.

With this object before me, I requested Mr. Robbins to make for me a solution consisting of absolute ether, having a boiling point of 92° Fah.

charged to saturation at a low temperature with tannin, and afterwards treated with xyloidine, a little short of saturation. The compound, made with much care, came out well. It ran easily through the spray tube without blocking; it produced good local anæsthesia, and it possessed an agreeable odour.

In order to test to the extreme the effects of this preparation as a styptic, I took sheep's blood, removed all the fibrine previous to coagulation by whipping, and then let the blood remain exposed to the air for two days to ensure partial decomposition. In this way the blood was rendered nearly as fluid as port wine, and in the most unfavourable condition for being transformed into clot. A few drachms of this blood were now placed in a saucer, the saucer having been warmed to the temperature of the body. The spray of the styptic ether was then directed upon the blood from a full-sized spray tube, and in five seconds the whole mass of blood was so thoroughly solidified that the saucer could be turned upside down without any escape of fluid. The blood, which had previously presented the odour of putrefaction, was also deodorised, and remains quite inodorous at this date—ten days after the experiment. The blood sets in a firm leathery consistence, covered on its upper surface with a fine whitish layer, with a bright vermilion colour beneath.

These are the effects of the styptic ether on blood, the spontaneous coaguability of which has been lost, and I had the pleasure of showing these effects at the College of Physicians on Friday last during a lecture on heat and cold in the treatment of disease; but these effects are trifling when compared with what takes place on blood newly drawn, and which contains fibrine. In this case the process of coagulation under the influence of the spray is the work, I had almost said, of a second.

When this spray is directed on an open bleeding living surface, the primary effects are those produced by the cold—namely, the condensation and whitening of the tissues. If blood be flowing, it solidifies, and when the parts relax, new blood that may coze up enters the solid blood as though it were a sponge, quickly solidifying by coagulation and stopping further flow.

The applicability of this process for the arrest of hæmorrhage will occur to the mind of every practitioner. The substances used in the compound are innocuous, and the combined influence of the cold and the styptic are immediate, and so decisive that I can scarcely imagine any hæmorrhage they would not control. I have not had an opportunity of testing the point, but I have no doubt from the influence of the styptic on the decomposing albumen of defibrinated blood that even in those cases of hæmorrhage where the blood is preternaturally fluid, the styptic

spray would arrest the hæmorrhage entirely. Where the blood contains fibrine in a natural condition, I cannot imagine a case in which the fluid would not prevent exudation.

The essential elements of this process are three in number:

- 1. The immediate constringent effects of cold on the blood vessels.
- 2. The chemical action of the solution on the fibrine and albumen of the blood.
- 3. The extreme mechanical fineness of distribution of the fluid on the bleeding surface.

The styptic ether can not only be applied to open wounds on the skin, but to hæmorrhage after the extraction of teeth, and, by means of a uterine tube, to hæmorrhage arising from cancerous disease of the uterus or other cause. It might also be applied to the rectum in cases of hæmorrhage from piles.

The apparatus required for this styptic ether is mechanically the same as for ordinary ether—that is to say, my spray tube with Dr. Clarke's hand bellows. The tube, however, requires to be made of different metal from that ordinarily in use for local anæsthesia; and I have therefore instructed Messrs. Krohne and Sesemann to construct a special tube for the purpose.

### FERRO-STYPTIC ETHER.

I have tried other experiments with the persalts of iron, which are more or less soluble in ether, especially the perchloride, and these one and all produced, as a styptic ether, rapid coagulation of blood. Solutions of iron salts in ether are not, however, more effective than the ether I have already described; and as they destroy the tube rapidly, act upon clothing injuriously, and do not so thoroughly deodorise, I do not think they are in the main so practical.

The styptic ether, containing xyloidine and tannin, will keep ready for use any length of time, as there is nothing in it to undergo decomposition; and as very small quantities of it are required, it will become, I trust, of standard service to the Medical practitioner. It would be of great use also to surgeons on board ship, and particularly to army surgeons. In case of warfare it would be exceedingly useful on the battle field, as under the instruction of the surgeon it could be used by an orderly, so as to prevent hemorrhage instantaneously in the case of flesh wounds. It would also form a useful addition to the Medical cabinet of travellers, who by necessity are removed from the direct succour afforded by Medical art.

### A CASE OF RECOVERY FROM REFLEX PARALYSIS.

By Dr. Fraser, Senior Physician to the London Hospital.

The statement by Brown-Séquard, that the principal symptoms and affections of brain diseases may be caused by an irritation starting from any viscus, or any nerve of the skin, or mucous membranes, receives corroboration from the following case, supplied to me by the patient, Dr. Douglas, residing in West Maitland, Sydney. He has given his own case so graphically that if it were not for want of space the whole of the melancholy record would be read with interest. The heads will sufficiently explain the prominent points.

Having previously been in good health, he was, on January 22, 1864, attacked with dysentery, from which he recovered, and on February 28, having experienced during his illness great inconvenience from piles, he had a ligature placed on a pile. In his own words,—"I experienced intolerable pain, with indescribable sensation in the nates and rectum while sitting."

March 5.—Pile sloughed off. Experienced a sensation of numbness on left side of the body, and in the perineum.

6th.—Extensive ulceration round margin of anus; a fulness of left hip. 10th.—A sensation of fulness and general uneasiness of left hip and cheek; slight twitching and numbness of fingers and legs.

14th.—Speech slightly affected. Strychnine, in doses of  $\frac{1}{24}$ th part of a grain, ordered three times a day; but the characteristic spasms so soon followed that it was omitted. It was resumed on April 1, but again discontinued on the 5th, for the cause above named. Quinine and stimulants were now freely used.

On June 17 the symptoms had increased; there was oppressed breathing, restlessness, complete loss of sensation and motion in lower extremities. On July 10, quite helpless—cannot move either hands or feet. From this date a gradual improvement began, and on February 19, 1865, he was able to move about slowly, and now (November, 1865,) has completely recovered.

Irrespective of the illustration of the reflex theory of paralysis, this case presents an instance of the beneficial employment of stimulants and avoidance of depletion, thus giving a practical instance of a change of type in disease over this globe; for although the symptoms increased for some days after the use of quinine and stimulants, these aggravated symptoms could not be traced to the use of alcohol, as this remedy was uninterruptibly continued, and the successful result followed.

### KREASOTE IN DIPTHERIA.

By. J. J. Knort, M.D., of Griffin, Georgia.

Owing to the speedy action and happy results following the use of Kreasote in Diptheria, coming under my observation, I am induced to give, in a short article, the manner in which it has been employed by me during the past three years, in military and civil practice.

In the year 1863, while in charge of the Small Pox Hospital for Longstreet's Corps, Army of Northern Va., diphtheria prevailed to such alarming extent, as a sequel of that loathsome disease, variola, and the mortality was so great in the cases under my care, that I was induced to look out for some more useful mode of treatment than had been used in its management previously. Regarding the disease, in the earlier periods, as local in its character, and of a septic tendency, I determined to test the virtues of this powerful antiseptic, local alternative, and styptic.

The first case in which I used it, was a very malignant one; so much so, that at one time I had almost despaired of his recovery. The following formula gives about the strength in which the remedy was applied to the parts affected:

B Kreasote 3 ji. Aqua Font. 3 ji. Pulv. Acacia QS.

A sponge saturated with the Kreasote thus suspended in mucilage, was applied to the parts where the pseudo membranous exudations were exhibited, early in the afternoon. In a few hours another application was made, and, without further treatment, all the more violent symptoms disappeared during the night. On the following morning my patient seemed so much relieved that further treatment with the remedy was unnecessary.

Continuing this application in the treatment of subsequent cases, I lost no more cases from this disease.

After my return to the 53rd Georgia Regiment, as Surgeon of that command, so successful was this mode of treating diphtheria, that it rarely, if ever, became necessary to send a case of the disease to the General Hospital, although several severe cases occurred in the regiment.

Since my return from the army, I have adopted this treatment in several cases of a decidedly diphtheritic character, in all of which much benefit was derived, and in one case particularly, which I distinctly re-

member to have been relieved almost entirely by one application, after suffering for a week under the ordinary treatment.

What has been said in this short article is intended, at least, to call attention to an important remedial agent in the treatment of a sometimes very troublesome and disagreeable disease.—Atlanta Medical and Surgical Journal, April.

### Midwifery and Diseases of Women and Children.

MANAGEMENT OF " RETAINED PLACENTÆ" IN ABORTIONS.

By C. B. Sterling M. D., Senior Surgeon-Accoucheur Queen's Hospital, Birmingham.

M. J., aged 29, married; fifth child; six months advanced in pregnan. cy; has hitherto carried her fœtus to the full time of utero-gestation. She was taken with uterine pains early on Saturday morning, February 3, 1866, which continued on and off until I was summoned to see her on the following Monday at 10 a.m. I saw the patient at 10.30, and found she had had pain more or less intense during the previous three days. She had lost but very little blood. A vaginal examination, which is the only one to guide us to an accurate diagnosis in these cases, was at once made. It revealed the presence of the fœtus in the vagina, and a patent state of the external opening of the uteri. On removing the fœtus, the umbilical cord became detached from the placenta, three-fourths of it being left adherent to the fœtus, and the remaining fourth to the afterbirth. This severance was afterwards found to be owing to a state of decomposition which had set in apparently at the time when the pains had been first felt by the patient. As the after-birth could not be felt, and as there was no flooding, after waiting a little time, I adopted my usual course—plugged, and left the patient, promising to return in the course of seven or eight hours; but I requested the attendant to send for me immediately, should anything occur of an alarming nature during my absence. When I visited the patient again at the expiration of eight hours, I found she had been pretty confortable, free from pain, and had been soothed by sleep. She told me she had suffered occasionally, from pains, but they were of short duration, and had given her but slight uneasiness. On removing the plug, the placenta came away with it, accompanied by a few coagula of blood. There was very little flooding. may be as well here to remark that the plug I used consisted of shreds of linen—the only available substance at hand.

This case I record as one of very many to illustrate a practice I am

in the habit of pursuing in the treatment of cases of abortion in which the retention of the placenta is a source of trouble and anxiety to the acconcheur. Young Practitioners especially have the notion that, at all risks, the placenta should be removed before they leave the patient, and that she is in imminent jeopardy if it be permitted to remain longer than half-an-hour, or at the most three hours, and they are apt-too apt when nature does not assist them in this much-to-be-desired end-to summon to their assistance the ready resources of art so abundantly supplied them by those skilful and ingenious Obstetricians whose mechanical inventions for this purpose are most beautifully and cunningly contrived, and who quite ignore the maxim that " meddlesome midwifery is bad." There are many such instruments described in the various works on midwifery. The best of the kind, I think, is the "wire crochet" of Dr. Dewees. With this we could not do any harm if we used the commonest precaution. But I maintain that, in the majority of cases, the finger of an expert Practitioner and the vis medicatrix nature are more to be depended upon than any artificial appliance.

When the placenta can be felt over the os uteri the finger may be passed around it, and by a little skilful manœuvring it may readily be detached and extracted; but I would not advise any prolonged attempts to dislodge it, as by so doing the material parts may be much irritated and the patient's suffering greatly enhanced.

Plug and leave the case in the hands of nature. The kind of plug you should use is a matter of no very great moment so long as it is of a soft and yielding material, adapted to accommodate itself to the parts. In cases of emergency, where no time can with safety be wasted, you will be glad to avail yourselves of a good silk handkerchief, and this I have found to make an excellent tampon, answering every needful purpose. Cotton wool is, perhaps, preferable. Small pieces of sponge, about the size of a walnut, to which are attached pieces of string, are those more generally recommended. One great objection to them is, that when they become saturated with the feetid discharge they become obnoxious to the patient, and are liable to promote the accession of febrile symptoms. To prevent this, they must not be kept too long in the vagina. Whatever plug we may employ, we should take care that the whole of the vagina be well filled, but not to such an extent as to cause by distension, pain-(I may remark here that in midwifery operations we should always endeavour to avoid causing pain to the mother)—but so as to prevent the discharge of blood from the uterus externally. Some may be haunted by the idea that although the plug is in situ that internal hæmorrhage may take place to an alarming extent, but I do not see how this can occur to any great degree when we bear in mind that there is a small uterus, not large enough to admit the hand, partly occupied by the placental mass, and the os uteri blocked up by the artificial plug. In my own practice, when I adopted the treatment I am describing, I have seldom met with hæmorrhage that either caused me any anxiety or created much depression of the system of the mother. To recapitulate, I would recommend, in the treatment of cases of retained placenta in abortion, the following points to be observed: -1. If it be possible, remove the placenta by the finger; the sooner this is effected the better, but do not rashly act, and do not let the attempt last too long, as you have nothing to fear by its retention. 2. Plug, and use that which you have readiest at hand, but the sponge plug, in my opinion, is the best. 3. Wait eight, ten, or twelve hours before you remove the plug, and you will generally find, on removing it, that the after-birth either comes away with it, or it is found lying in the vagina, from whence it may be easily withdrawn.—Medical Times and Gazette, June 16.

### FORTY CASES OF ARTIFICIAL PREMATURE LABOUR.

Dr. Simon Thomas, of Leyden, relates forty cases in which labour was artificially induced. The indications were chiefly contractions of the pelvis; and these were determined less by the histories of previous labours than by accurate measurements expressly made. Thus, in five cases, the patients were primiparæ. The first method employed was to place a bougie for a short time a few inches between the uterus and the membranes, changing it every day for a larger one. Labour only came on in ten days, and the forceps was used. In another case Kiwisch's douche was used. Labour followed in five days. The mother died of pyæmia. In other cases the bougie was used, or the douche; generally days elapsed before labour. Afterwards Krause's method, the leaving an elastic catheter in the uterus, was used. The time expended was from six to ninety-two hours, the majority taking from twenty-four to forty-eight hours. Of the thirty-two children born after Krause's method twenty-five lived; of the thirty-two mothers, twenty-five had a quite natural puerperal history; four died of pyæmia or endometritis; (Brit. and For. Med. Chr. Rev.)

#### RETENTION OF CATAMENIA FROM OBSTRUCTION.

By F. C. Robinson, M. D., Chicago Medical Journal, June, 1866.

Miss W., act, 15, menstruated for the first time, in August, 1864, and continued regular until November, when it ceased. Since that time she

had the menstrual molimen every four weeks, but without any discharge externally. Other means to restore it having been tried, resort was had, upon the diagnosis of "obstruction," to surgical interference. examination the vagina was found closed by a firm elastic membrane, forming a cul-de-sac, point upwards, about an inch and a half from its orifice. I administered chloroform, and using a director and my index finger, ruptured the membrane, causing slight hemorrhage, but as yet no relief. Above this membrane the vagina was crossed by several fibrous bands, which I also divided, revealing a distended uterus. It was lower in the pelvis, and pressing upon the bladder, causing irritation and a frequent desire for micturition. The os uteri was also closed by a membrane similar to the one above mentioned, and which I succeeded in penetrating, using a female catheter, when about sixteen ounces of reddish brown, tenacious fluid or menses in a condensed form escaped. The pain ceased in a few hours, and except a slight nausea from the chloroform. the girl did well, and was soon able to resume her duties.

## Materia Medica and Chemistry.

EXPERIMENTAL INVESTIGATIONS INTO THE ACTION OF THE BROMIDE OF POTASSIUM.

This is the title of a very interesting paper by Dr. Roberts Bartholow, in the November number of the Cincinnati Lancet and Observer. The author's investigations were conducted in three directions: 1st, the chemical properties; 2d, the physiological effects; and 3rd, the therapeutical uses of the salt.

The physiological effects of the article when taken into the stomach, Dr. B. sums up as follows:

- "1. It proves irritant in large doses to the mucous membrane of the stomach.
- "2. It is rapidly absorbed into the blood, and may be detected soon after in the urine.
- "3. It acts upon the nervous centres, producing sedation, sleep, reduces the action of the heart and arteries, lowers the temperature, and diminishes the retrograde metamorphosis of tissue."

The prolonged administration of the bromide of potassium produces according to Dr. B. the following effects:

- "1st. It diminishes and ultimately entirely neutralizes the sexual appetite.
  - "2d. It produces weakness of the muscular system.

"3rd. It is irritant to the stomach if given in considerable doses; and "4th. It interferes with the secondary assimilation, lessening the retrograde metamorphosis of tissue."

In regard to its therapeutical uses Dr. B. extols it as a disinfectant and deodorizer, as an escharotic in sloughing and gangrenous ulcer, phagedenic chances, hospital gangrene, epithelioma, etc.

'The actions of the bromide of potassium physiologically considered," Dr. B. states, "consist in a sedative or contra-stimulant effect upon the nervous centres, producing as secondary phenomena, sedation of the heart, anæmia of the brain, anaphrodisiac effects and diminution of the retrograde metaphorsis of tissue. It has come into use in various functional and organic nervous disorders, and in certain sexual diseases, where a calmative and sedative influence is desired."

This article Dr. B. considers to be indicated as a hypnotic in states of nervous excitement without congestion of the nervous centers; in hysterical insomnia; in delirium tremens; in the insomnia of excitable business men, or, in general terms, in those forms of insomnia dependent upon excitation without increased blood supply. Dr. B. has found it especially useful in irritable bladder, and the chordee of gleet. We have several times prescribed, ourselves, with benefit in these conditions.

For a careful survey of all the facts Dr. B. gives the following as the methodus medendi of the salt in question:

- "1st. The bromide of potassium acts by absorption into the blood.
- " 2d. Its effects are expended upon the nervous centres, or the cerebrospinal axis.
- "3rd. Sedation of the heart and circulation, and the various local sedative effects are secondary results of the impression made upon the nervous centres.
- "4th. Its physiological effects are not very decided, and are easily modified by any local disturbance.
- "5th. Its therapeutical action is still more decidedly influenced by local morbid processes.
- "6th. It is indicated where a sedative to the nervous system is required—in insomnia; too great reflex excitability; nervous and spasmodic affections of the larynx and bronchi-sexual excitement, and in an irritable state of the sexual organs.
- "7th. It will be effectual in the foregoing conditions, in proportion to the degree in which structural lesions are absent, or in other words, in proportion to the degree in which these morbid states are functional rather than organic."

The bromide, Dr. B. asserts, possesses none of the peculiar alterant

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property of the iodide. Whilst this fact is true, it is undoubtedly the case that the bromide relieves congestion of certain organs, diminishes their bulk, or, as it may be styled, produces resolutions of an engorgement. Such action, apparently alterative or resolvent, is not really so. It has been exhibited mainly in certain states of the uterus and ovaries—states of hyperæmia dependent upon sexual excitement, or upon the monthly nisus. The apparent resolvent power is, in this case, due to the sedative impression of the remedy upon the sexual organs and upon the vaso-motor nerves.—Am. Jour. of Medical Sciences.

### Miscellaneous.

Endermic Poisoning by Belladona.—The application of belladona to the breasts for the relief of painful distension of the organs, especially after sudden weaning, is often resorted to, and with advantage. Where there is an abrasion of the skin, however, this practice, it should be known, is not devoid of danger. A case of poisoning, under such circumstances, is recorded in the Lancet, of November 11, 1865.

The amount of castor oil manufactured yearly in the United States is estimated at 300,000 gallons—one half of which is made by Baker & Brothers of New York.

Pyæmia. In a discussion on Pyæmia, which took place at the New York Academy of Medicine, Dr. Krakowitzer recapitulates the essence of his remarks, as follows. 1. Pyæmia is not the result of the admixture of pus with the blood; 2. The metastic abscesses produced by emboli from venous thrombi are not pyæmia; 3. Pyæmia and septicæmia are different diseases; 4. Both occur frequently together in the same individual; 5. Pyæmia is an infectious specific disease; 6. The infectious substance is either produced in the diseased individual; or 7. By pyæmic miasma generated outside of the patient; 8. The name of pyæmia should be abandoned, and that of purulent diathesis substituted. (Phil. Med. and Surg. Reporter.)

Errata in our last.—Page 1 heading 3rd line from top for Surgions read Surgeons; page 2 line 13, for Ferguson read Fergusson; page 4 line 12 patilla in latual &c., read patilla, or in latual &c.—

Line 21, for anticulating read articulating; line 30, from the Chloroform as much vomiting and nausea existed; read from the Chloroform; as much vomiting and nausea existed, &c.

Page 6, line 24, is a very limited motion, read is very limited motion.

Page 8, line 20, advisible read advisable.

# Canada Medical Journal.

MONTREAL, AUGUST, 1866.

### THE MILITIA GENERAL ORDER.

OUR readers will have perceived the remarks offered by us on the militia general order of July 20, having reference to the appointment of surgeons and assistant surgeons in the volunteer force of Canada. The point we would urge on the Government to rescind, is that objectionable clause requiring that "an examination of fitness" shall be passed before "a regularly constituted board of medical officers of the regular army."

In the case of combatant officers, we freely admit the necessity of submitting the candidate to examination before a board of officers of the regular service before placing him in a position of trust and responsibility; but in the case of medical officers, while yielding the point of rendering it necessary to submit all candidates to examination, we take exception to the constitution of the board of examiners.

There are already connected with the force men who have grown grey in the study and practice of their profession. Several hold offices of trust and responsibility in public hospitals and other charities, the duties of which they have performed for years with credit to themselves and advantage to the community. Moreover, they are men whose services. in the event of actual hostilities, could ill be dispensed with. have been engaged for years in public teaching, and are regarded by the community with confidence, as men of talent, learning, and research. Why our Government, acting under advice, should step aside to pass over these men without giving the circumstances that deliberation which their importance demands, seems to us passing strange. If the Government deem it necessary to insist on examinations of applicants for appointments as surgeons and assistant-surgeons in the volunteer forceand we see no objection to it-there is abundance of material in all our large cities out of which to form an examining board, without calling to their aid men, many of whom are comparatively fresh from the schools, surgeons but in name, and who have no opportunity of acquiring much practical experience, except, perhaps, in the daily routine of a regimental hospital. The examination may be said to be of a special character. The subjects of hygiene and statistical inquiry are specially exacted from candidates applying for appointment in the regular service; but how, let us ask, is the board constituted before whom this special examination is passed ? Are they not appointed under royal commission, and the selections made from among the ranks of the first scientific talent in the country?

Our Minister of Militia is, we presume, acting under advice, but we would recommend him not to allow himself to be placed in a false position, to take no man's word without being himself certain that the premises are correct. We would be sorry to see him render himself simply ridiculous in the selection of a board of examiners for volunteer surgeons, especially after having deserved well of his country in having acted with prudence and foresight in other matters connected with the volunteer force. If it be thought necessary, we make no doubt that practitioners hailing from our Universities are quite equal to passing any examination before any board, however constituted. With reference to McGill University, we say it, not boastingly, but with pride, that those of our students who have presented for army medical appointments, received them, after having passed highly creditable examinations. This is the more noticeable, as these men had to compete with candidates hailing from all the universities and colleges in the kingdom.

We say, again, if an examination of fitness is to be the test, let the board be selected from among the first men in the ranks of our profession, and not from among those holding the same position as the candidate;—in some instances his inferior in the social scale,\* as well as his inferior mentally, educationally, and in every other respect, except in not holding Her Majesty's commission as a non-combatant in Her Majesty's regular army. Since writing the above, a Medical Staff Officer has been appointed, and we feel certain, that that gentleman will do all in his power to organise the Medical department of the Militia on a basis as to command the respect and confidence of the public.

### REFORMATORY FOR INEBRIATES.

WE are happy to announce that Mr. and Mrs. Wakeham, the well-known managers of the private asylumn at Quebec, have, at the suggestion of their well wishers, determined to alter the objects of their home, and receive for isolation and cure those afflicted individuals, who, from long indulgence in the use of intoxicating beverages, have brought themselves to that state of mental disease whereby they are unable to combat with the temptation whenever offered. The disease, dipsomania, is well recognised at the present day, and many valuable lives are annually sacrificed by the neglect, on the part of society, of legislating on an evil which is alarmingly on the increase. In the absence of legislative enact-

<sup>\*</sup>By this, we would intimate, that in some of the country districts, practitioners of old standing, and the first men in their district, may possibly be the only Surgeons available to Government as Surgeons of Batallions; and whose Position is magnificently superior to those who are proposed by Government to constitute their Examining Board.

ment, an asylum with the above objects is much lessened in usefulness, as it is only those who voluntarily consent to enter its walls and remain there, who can be benefitted. Habitual drunkenness is an offence punishable by fine or imprisonment, but it is seldom that full justice is meeted out to the better class of individuals. It is a crime against our Maker, and one against which the most fearful penalty is denounced: but, regarding drunkenness as a social evil, we do think that society is bound, for its own safety, to enact stringent laws, whereby the drunkard can be restrained, and, we believe, ultimately cured of his disease. most careful discrimination would have to be taken to protect the interests of individuals; but the necessity of restraint seems urgent, and in a pecuniary point of view, the saving to the country would, we feel convinced, be marked, as more than three-fourths of the crime, which call for attention at the hands of the officers of the courts, are the direct result We are happy to announce to the of the excessive use of the bottle. public that the enterprising proprietors of the Belmont Retreat at Quebec have been induced to make the trial of establishing an institution with the above object, which is calculated to be of so much permanent benefit, and we trust their efforts will be successful.

### MEDICAL STAFF OFFICER OF MILITIA.

Our readers will have perceived the appointment by our Government, of Gilbert Prout Girdwood, M.D., M.R.C.S. Eugland, to the post of Medical Staff Officer of Militia. This is an excellent appointment, and from what we know of the Doctor, we feel convinced he is the right man in the right place. Dr. Girdwood has for the last two years been engaged in the practice of his profession in our city. Before that period he had acquired a knowledge of the requirements of an army in the field while attached to the Grenadier Guards; he served in that regiment during a period of ten years. We have every confidence that, should the Militia of this Province be called into active service, a most efficient Medical Staff with full Hospital requirements will be at hand, so that our Volunteers will engage in their work with the satisfaction of knowing that in case of sickness, or the reception of wounds in actual engagement, every care and comfort that can be had by the Provincial authorities will be available. We are aware that in June last, owing to there being no officer specially appointed by the Government, several of the battalions went to the frontier without adequate appliances in their medical department, although we must state that the Inspector General, Dr. Muir, afforded all the assistance which lay in his power, in supplying volunteer Surgeons with paniers, instruments, and everything which was likely to be necessary. We regard this appointment as in every way a most judicious step.