

CASE CCCCXX. M., aged 10. I removed the cornea with a tenaculum and scalpel. The vitreous humour did not escape at first; but in puncturing the clear surface of it with the point of the knife, it gushed out suddenly, and the eye became collapsed. He recovered speedily.

CASE CCCCXXI. M., aged 11. (I operated on this patient under chloroform; all the previous ones were without.) I removed the cornea, and the iris, which was adherent to it, and the lens followed. He recovered immediately.

CASE CCCCXXII. F., aged 13 months, with staphyloma of the left eye from birth. The cornea (very much thickened), and the iris adherent to it, with the lens and some vitreous humour, were removed, and the wound healed at once.

CASE CCCCXXIII. F., aged 22, an otherwise good-looking young woman, with very prominent eyes. I operated under chloroform; and passing a needle and thread through the cornea, removed it, with the lens and some vitreous humour. A clot ultimately formed in the eye, and was discharged, and she recovered well. She called upon me sometime afterwards with an artificial eye, and it was difficult to recognise her.

CASE CCCCXXIV. F., aged 11. I operated without chloroform, removing, by tenaculum and knife, the cornea and iris, and some vitreous humour. She was soon cured.

CASE CCCCXXV. M., with staphyloma of the right eye. The irritation kept his left eye weak. With tenaculum and knife, I removed the cornea. There was an unusually free flow of blood, and after a day or two a clot projected from the eye. The case did very well.

CASE CCCCXXVI. M., aged 30. I operated under chloroform; and as another plan had been recommended, I tried it in this case. With a strong silk, I tied up his cornea by the (so-called) Fergusson's knot—i.e., a double figure-of-eight knot—and punctured it as well. He suffered more pain than is usual after these operations; but the case did perfectly well.

CASE CCCCXXVII. M., aged 4½. In this, and other subsequent operations, I returned to the old plan, and removed the cornea and iris, with the aid of the tenaculum and knife. The mother took the child home, and when I saw it, in a few days time, acute inflammation and suppuration, with severe constitutional disturbance, were set up, which afterwards subsided, and the case did very well.

REMARKS. I believe that, in performing this disagreeable operation, the old plan of simply cutting off the projecting part is the best. During the time that I was surgeon to the Blind Asylum here, I operated on a considerable number of such cases; but I have no particular record of them. I found, not unfrequently, that the patients, seeing a great glare of light streaming through the vitreous humour, after the removal of an opaque cornea, were much disappointed that they did not recover any sight. There are two symptoms following operations on the eye, of very constant occurrence, and very painful to the patient, and unmanageable: they are the vomiting (in young subjects particularly) which follows needle operations for cataract, and the intense pain at the back of the head and brow, which follows equally frequently the operation for staphyloma, particularly if much vitreous humour have escaped. I cannot explain the pathology of these symptoms; nor do I know how to treat them with full confidence of cure. Opium does not answer our expectations in such cases. I have formerly bled adults from the arm, and this plan seemed most effectual. It is important to get rid of the lens in staphyloma operations.

[To be continued.]

FERRI CARBONAS EFFERVESCENS: A NEW AND ELEGANT FORM OF CHALYBEATE.

By THOMAS SKINNER, M.D., Obstetric Physician to the Liverpool Dispensaries, Fellow of the Obstetrical Society of London, etc.

BELIEVING that the protocarbonate of iron, even in a solid state, is one of the best preparations we can administer in the thousand and one diseased conditions in which chalybeates prove useful, and that its present official preparations are incapable of preserving it from decomposition for any reasonable length of time, I have long thought it a desideratum to obtain it nascent, and in a soluble form, at the time of ingestion. I am now happy to state that, after a great deal of trouble and experimenting, both by myself and by various experienced chemists, I have, at last, succeeded in obtaining the protocarbonate in the permanent and elegant form of an effervescing granular powder.

Formula and Process of Preparation. The effervescing carbonate of iron is made as follows:—

R ξ Acidi tartarici ζ ijj; sodæ bicarbonatis ζ v; ferri sulphatis $5x$; pulveris sacchari ζ j $3v$; acidi citrici $3j$.

1. Mix the sulphate of iron with the sugar and part of the tartaric acid. 2. Mix the citric acid with the remainder of the tartaric acid and the bicarbonate of soda. 3. Add the mixtures, and thoroughly incorporate them by sifting. 4. The whole is now to be thrown into a metallic pan set in a water bath; in a few minutes it will separate, when it should be rapidly stirred until granules are formed. If preferred, it may then be flavoured with oil of lemon; hitherto, however, the preparation has been without it.

Physical and other Properties. When the above is carefully prepared, it has all the appearance of the popular and well known granular effervescent citrate of magnesia, with the addition of a slight yellowish green tint. Every drachm and a half contains ten grains of sulphate of iron, which, with a complement of bicarbonate of soda, is certain to produce, in a state of solution, four grains of nascent protocarbonate of iron. At the same time, there is developed a tartrate with a little citrate and sulphate of soda, which is, if anything, an advantage, as they act the part of a very gentle saline aperient, obviating the usual astringent effect of preparations of iron, as well as the too frequent constipation attending cases requiring chalybeates, particularly amongst females. The taste of it depends very much upon the amount of dilution. When taken in the dose and manner hereinafter recommended, the taste is that of a mild, sparkling, and refreshing chalybeate.

After the effervescence subsides, a perfectly clear, light-green solution remains, which, if allowed to stand for some time, becomes of a deeper green colour on the surface, gradually increasing from above downwards, and floating like a cloud upon the upper stratum of the liquid. This appearance was at first mistaken for oxidation, but the more correct explanation seems to be that it is the carbonate of iron which was retained in solution by excess of carbonic acid gas; that, as the excess escapes from the surface, the carbonate separates from the solution in the form of a fine cloud and becomes ultimately precipitated in the form of an impalpable powder. So far as permanency is concerned, the preparation has stood the test of several months, and it now remains as good as the day when it was made.

Dose, Uses, Mode of Administration, etc. The dose is a teaspoonful, more or less (about a drachm or a drachm and a half), twice or thrice a day, in half a tumbler or more of water, an hour after, between meals, or upon

an empty stomach, as is found most suitable. Dilution, within reasonable bounds, increases the tolerance of the remedy and favours its therapeutic action. It may be drunk during the action of effervescence, but it seems to me preferable immediately after it subsides. When a prolonged course of iron is required this preparation will never take the place of the protosulphate, the iodide, or the sesquichloride; but where a moderate course of a few days, or a week or two, is necessary, it will be well borne by the stomach. It is not only well borne, but it seems to produce a much more manifest chalybeate effect within a given time and in a smaller dose, than any other preparation of iron with which I have had experience.

In facial or other forms of neuralgia, arising from anæmia or other cause relievable by iron, and particularly if the bowels are at all torpid, a few doses often act like a specific. It ought, however, to be continued after the pain disappears, so as entirely to remove the condition upon which the neuralgia depends. I may remark that the quantity of iron, and the aperient effect might be doubled if required; the present proportions, however, have been found by experience to be the best for ordinary purposes.

The pharmacist who has prepared this effervescent chalybeate for me, and who deserves great credit for the perfection to which he has brought it, is Mr. Banner, chemist, 4, Hardman Street, Liverpool.

Let me add, in conclusion, that in prescribing chalybeates in general, particularly for those who are fastidious about the colour of their teeth, I am in the habit of ordering at the same time the following wash to be used with a toothbrush morning and evening, or after each dose:—

R Potassæ quadroxalatis ʒss; aquæ rosæ ʒvj. Solve.
After the use of this the mouth should be rinsed with cold or tepid water.

Transactions of Branches.

MIDLAND BRANCH.

AMPUTATION THROUGH THE KNEE-JOINT.

By A. H. DOLMAN, Esq.

[Read June 28th, 1860.]

THE following case of amputation through the knee-joint, consequent upon an injury to the leg by the wheel of a locomotive, appears to me sufficiently interesting and important to occupy your attention for a short time.

For several months I have been impressed with the notion, that amputations through joints have perhaps been, to some extent, unnecessarily avoided by many surgeons. The reasons that led me to the consideration of the subject are these. In the course of a very large experience in removing fingers, I have frequently observed that the stumps healed more rapidly when amputated through the joint, than when the bone was nipped or sawn through. I have had, moreover, several opportunities of observing the same fact in amputations of the wrist. These latter were primary operations, in consequence of injury to the hand; and all the cases did well, and healed chiefly by first intention. Convinced as I am, by these observations on the smaller joints, of the safety of operating through the articulation, I would ask, Why should it not be right to try the same method on the larger limbs in properly selected cases?

From an eight years intimate connexion with hospital practice, I can call to mind many instances of injury to the leg, in which this operation would have been practicable, but where amputation of the thigh has been resorted to, the fatality of which is most alarming. Of

course it is very seldom that operation through the knee would be advisable in *disease* of the lower extremities, as the joint itself is so frequently affected. The cases to which this method is, in my opinion, more especially applicable, are those in which we find injury to the leg, necessitating amputation, but too high up to leave the chance of saving any useful portion below the knee. Erichsen and Miller describe the operation, and recommend a long posterior flap to be made, but appear to judge somewhat unfavourably of its safety or utility. In the case I am about to report, the flap was taken from the anterior surface of the leg, and the patella was not disturbed. This, I think, is an important point; as, in the first place, there is left for a covering to the stump a portion of integument accustomed to pressure; and, in the second, all protraction of the operation by division of the muscles, in dissecting out the patella, is avoided.

With your permission, I will now mention a few of the advantages of this operation, in properly selected cases, over that of amputation of the thigh.

The limb is removed at a greater distance from the trunk, and consequently with less risk to life; there is a much smaller wound, and therefore much less demand upon the reparative powers; much less muscular structure is divided, and therefore the chance of rapid healing is much greater. In general fewer arteries will be severed, and therefore fewer ligatures will be required, and the subsequent irritation will be less; the bone being uninjured, liability to exfoliation will be lessened. The greater length of the stump would also make it more useful, and suitable for the adaptation of an artificial limb. As very few muscles are divided, the motions of the stump would be less interfered with; besides which, there would be less liability to inflammation of the fascia and intermuscular septa. The comparatively small number of nerves would lead us to expect the stump to be less sensitive. There would be no danger of conical stump. There is less pain attending the dressings. And, lastly, there is a strong probability that such a stump would be able to bear pressure on the end.

I read the report of the case as furnished by the dresser, Mr. A. Hancock.

John Milward, aged 26, railway guard, was admitted into the Derby Infirmary, April 11th, at a quarter past twelve A.M., under the care of Mr. Whitaker Johnson. Whilst he was employed in "shunting" some carriages a train came up and knocked him down, the wheels passing over both legs, completely crushing them. The right thigh was severely contused, the left slightly so; there was also a bruise on the forehead, but apparently of no consequence. On his admission, the heart's action was feeble, and the surface cold. Brandy was freely administered, after which he somewhat revived. Mr. Johnson was sent for, but, he being unwell at the time, Mr. Fearn kindly officiated for him. The patient having been placed under the influence of chloroform, the left leg was first operated upon, being removed immediately below the knee-joint, by means of a long posterior and short anterior flap. Four ligatures were employed, and the flaps were brought together by iron wire sutures and strips of plaster, after which a bandage was lightly applied. At the conclusion of this operation, he recovered in a great measure from the effects of the chloroform and was faint. Brandy was given with good results, and, after waiting a short time, he was again placed under chloroform, and the right leg was removed at the knee-joint, by means of a long anterior and short posterior flap, the patella being left. Four ligatures were used, and the flaps were brought together in the same manner as those of the left leg. After the operation he was exceedingly faint; so much so, that he was not lifted into bed, but covered upon the stretcher. Brandy was again freely administered.

10 A.M. He had had some sickness; but had slept and seemed rallied. He was placed in bed.