A CASE OF COMPOUND FRACTURE OF THE LEG, TREATED ON A NEW SPLINT.

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THE following case is reported in illustration of the use of a splint which I am now recommending for the treatment of compound fractures of the leg, and disease of the ankle-joint.

Hugh R., aged 15, a rivetter, was struck by a large iron plate on the outer side of his leg. When seen, the sharp end of the upper fragment of the tibia was protruding two inches out of a wound at the inner side of the leg, in the lower third. Ether was administered, and the wound enlarged, and thoroughly carbolicised. The bones were accurately fitted together, and a stout wire passed round them, and tightly twisted. Then, the patient being still under the anæsthetic, the splint was applied in the following manner.

With a strip of lead the contour of the front and back of the sound limb is taken from a few inches above the knee, down the tibia, over the toes, heel, calf, and back to the thigh. A strip of stout hoop-iron ($\frac{3}{8}$ inch $\times$ $\frac{1}{4}$ inch) covered with rubber tubing is then bent to lie easily over the outside of the lead pattern, following all its deviations accurately, so that it may fit without pressing unduly on any part (Fig. 2).

FIG. 1.—From a Photograph on the 5th day. (A) The splint. (B) The paraffin bandage. (C) The wax and carbolic oil finish. (D) The antiseptic gauze showing from under the stiff bandage. (E) The fractured limb.

FIG. 2.—The splint of hoop-iron covered with rubber tubing.

When the splint is ready (it is of course prepared before the anæsthetic is given) and the bones have been wired, the whole limb is thoroughly carbolicised, and the foot and leg well bandaged with antiseptic gauze, leaving a wide interruption at the site of the fracture. Over the gauze a layer of domette bandage, saturated with hot paraffin-wax, is placed, or a plaster-of-Paris bandage. As soon as the stiff bandage has set, the splint is put on, and more wax or plaster bandages are applied to retain it firmly in position. Lastly, cotton-wool is packed under the edges of the bandage at the interruption, and brushed over till saturated with Howse's mixture of bees' wax and carbolic oil, and the antiseptic dressing is completed (Fig. 1). A very little subsequent care in the dressings will prevent any discharge from getting between the leg and the splint.

The advantages of this mode of treatment are, that no deformity of the limb can possibly take place, as the bones are wired and permanently fixed under an anæsthetic; and that the repair is rapid, owing to the absence of movement necessary in the ordinary method of dressing compound fractures. The choice between paraffin and plaster-of-Paris bandages must depend upon the weight of the limb, and the fixation of the fragment. When the limb is small and the fragments are well fixed, paraffin is quite sufficiently rigid; but under the reverse conditions plaster-of-Paris should be used, at any rate for some part of the bandage. Paraffin is much the better material in every way, except for its want of sufficient rigidity in the warmth of the bed. In this particular case paraffin was used, and answered admirably. There was a good deal of oozing of blood through the night, but not a drop passed inside the splint. The case was dressed once a day for a week, and then every other day for a fortnight under the spray, when it was stopped, as the wound was healing well. On the eighteenth day the wire was untwisted, and the bones were quite firm. Granulations rapidly appeared in the bare bone at the bottom of the wound, and no necrosis occurred. The highest temperature attained was 100°, and that only on one occasion. On the seventh day the patient was dressed and taken to the Medical Institution in a cab, without the least pain

or inconvenience, owing to the perfect support given by the splint; and now, six weeks after a severe compound fracture, he is up on the couch, with the wound almost closed, and the measurements of the leg in every respect normal.

In cases of disease of the ankle-joint with discharging wounds, the splint should be fixed with paraffin, or simply with strapping, leaving all the heel and instep open, and the leg well protected under the splint by a soft or paraffin bandage. If the heel suffer from pressure on the lower bar, the leg and foot should be attached first to the upper bar alone, and then by a bandage round both. The dressings should always be slipped between the heel and the lower bar, or discharge will collect there and decompose.

The splint may be obtained from Messrs. Krohne and Sesemann, in London, and from Mr. Critchley in Liverpool. For hospital use, for compound fracture, it is best ordered in lengths of 5 to 6 feet for adults, to be bent to pattern by the surgeon; but in private practice, and for disease of the ankle, the pattern can be traced on paper from the strip of lead, and the splint ordered about half an inch larger in all dimensions than the limb.

CASE OF SPASM OF THE MUSCLES OF THE FACE AND CATARACT DUE TO DENTAL IRRITATION.¹

By HENRY SEWILL, M.R.C.S., L.D.S.

THE patient was a middle-aged lady, unmarried. She had suffered all her life from bad teeth and neuralgia. During late years the suffering had frequently been acute, and she had had a constant succession of alveolar abscesses, with great swelling of the face, especially on the right side. She had long been under the care of Dr. W. Hoffmeister, of Cowes, who had frequently urged her to have her teeth attended to, but without avail. The patient could not overcome her dread of dental operations. About two years and a half ago, during 1881, her right eye became painful at times, apparently from neuralgia. In January, 1882, contraction of the muscles of that side of the face took place, and had persisted ever since. In July of that year, drooping of the right eyelid came on suddenly, and she then discovered that she had lost the sight of her right eye. Dr. Hoffmeister, believing that her condition was due to the dental disease, and having again in vain urged her to have her teeth examined, sent her to Dr. Ferrier. In July, 1883, she went to Dr. Ferrier. He reported of the case as follows.

She was a very nervous middle-aged spinster, with facial spasm and apparent neuralgia on the right side of the face and head. She said she could not open her right eye; but, on examination, this was found to be not exactly true, as with effort she could do so. The closure of the eye was due to spasm of the orbicularis muscle, and was not ptosis. She would scarcely allow her head or face to be touched; but there was evidently great tenderness in the region of the right upper canine. The neighbouring teeth were much encrusted with tartar, and the gums looked red and swollen. The right lens was almost opaque. Believing that the cause of the neuralgia, the facial spasm, and the cataract was in the dental disease, Dr. Ferrier insisted that she should have the teeth set right or extracted. That the dental irritation was the cause of trophic disorder leading to cataract, Dr. Ferrier considered most probable, looking at all the circumstances of the case, and the fact that the symptoms were entirely unilateral.

The patient was at length induced to have her teeth examined, and came to me. I found, in the upper jaw, the stumps of some molars, and the bicuspid, canines, and incisors, except the left central and lateral incisor. In the place of these was a vulcanite frame, with artificial teeth, attached to the neighbours. This had not been removed for years, and, as well as the rest of the teeth, was covered with tartar. The upper teeth were all carious, and had been the centres of long standing inflammation. The right canine was broken down nearly to the gum. Considerable thickening and swelling extended upwards over the root; and pus could be pressed from the gum through small fistulous openings over the roots of all the teeth. The lower teeth, of which about ten remained in front, were hidden beneath an enormous mass of tartar, which extended fully half an inch over the floor of the mouth. The patient's confession that she had endured years of incessant pain and discomfort from her teeth through dread of dental operations, was amply borne out by examination. Nitrous oxide was administered on two occasions, and the upper teeth were extracted. The tartar was gradually removed from the lower teeth, and an upper set of artificial teeth was provided. Within two days of the extraction of the teeth, the facial spasm entirely dis-

¹ Read before the Harveian Society.