

THE TREATMENT OF FRACTURES IN BRITISH HOSPITALS.

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

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

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

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

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

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