cases practically abolishes muscular spasm, which is so often such a painful and distressing sympton. As an example of this I may mention the case of a young woman, who fell out of a second floor window, and was admitted into St. George's Hospital, suffering from a fractured fibula. She was exceedingly nervous, almost hysterical, and was screaming with pain. She was put to bed and the affected limb gently and continuously rubbed; within a quarter of an hour she had fallen asleep.

(2) It rapidly reduces the swelling due in the first place to extravasation of blood and afterwards to ædema, thereby preventing the subsequent stiffness of the muscles and other tissues.

(3) It increases the local blood supply and so keeps up the nutrition of the muscles, which otherwise waste. It also causes more rapid union of the broken bone, and tends to diminish the amount of provisional or ensheathing callus, and so prevents a certain amount of deformity, e.g., as so often seen after fracture of the clavicle. That massage hastens the union in the majority of cases, I have no doubt whatever, and the following case, which is only one out of many that could be given, proves it conclusively. A young man was admitted into St. George's Hospital, suffering from a fracture of both bones of the leg, due to indirect violence. The break in the tibia was about  $2\frac{1}{2}$  inches above the ankle-joint, that in the fibula rather higher up. He was treated by massage from the beginning, and in three weeks' time was walking about the ward by the aid of two sticks, without any splints or apparatus of any kind on his leg.

(4) It prevents the formation of adhesions in the neighbouring joints. In all fractures involving joints this treatment is specially useful and cannot be commenced too early in such cases as Pott's fracture, T-shaped fractures into the knee or elbow joints.

(5) It does away with the long and painful after treatment, when the splint or immovable apparatus has been removed. It is a wellknown fact that when all apparatus has been removed from a limb—for example, a leg, after fracture of both bones—it takes nearly as long a time to regain its proper use as was required for the union of the fracture, and in some cases very much longer. After treatment from the first by massage, when in the judgment of the surgeon the fracture is united, the limb is practically in the same condition as it was before the accident. Massage from the very beginning

-that is to say, on the day of the accident or on the following day-is not advisable in very oblique fractures, especially where the splints have to be removed to get at the part where the rubbing is required. From this it will be at once perceived that I do not advocate the treatment of fractures without splints; on the contrary, I strongly advise their use. but in a manner that is slightly modified to that which was in vogue formerly. In the case of a broken leg-for example, after reduction or "setting" of the fracture, the limb should be fixed on a back splint with a footpiece, with a side splint on each side. The foot should be firmly bandaged to the back splint, or, rather, to its foot-piece, and another bandage carried round the thigh and the upper end of the splint, which should reach as high as the middle of the thigh. The side splints should then be fixed by means of webbing straps, two usually being sufficient. The day after the accident, when the rubbing is to commence, only the side-splints should be removed. About the third or fourth day the bandage round the foot-piece may be taken off and the toes and ankle massaged. By the end of the first week, passive movement should be started, first moving the toes and then afterwards the ankle and finally the knee, all the splints being now removed. The limb should always be massaged for some minutes immediately before any passive movement is attempted. It is advisable, when dealing with people of small intelligence, to show them on the sound limb first, what you are going to do on the other side, and during the early period of the treatment the fracture should always be steadied with the hand. For the first three or four days, ten minutes daily is quite sufficient; afterwards, the rubbing and the movements may be continued with advantage for fifteen or twenty minutes once or twice a day.

Early massage in compound fractures is not advisable until the wound has healed, when the case is treated like one of simple fracture. Again, in young children, it is often difficult to to apply this treatment, as they are easily frightened, and are apt to move the affected parts in a manner contrary to the wish of the surgeon, and so do harm instead of good; but the ordinary smooth rubbing of the limb with the tips of the fingers or gently with the palm of the hand, is usually so comforting that, with a little extra care and gentleness, massage can be readily carried out.



