

UNUNITED FRACTURE OF THE FOREARM, WITH DEFICIENCY OF THE ULNA, TREATED SUCCESSFULLY BY EXCISION AND THE WIRE SUTURE.

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R. K., aged 29, was admitted into my wards on June 24th, 1873, suffering from an ununited fracture of the bones of the forearm. About six months before his admission, his forearm had been severely injured by machinery. Both bones were fractured, and a large lacerated wound was caused by the accident. He was taken to a provincial hospital, and carefully treated for several months. About three months after the accident, a large piece of bone (a portion of the ulna) gradually loosened, and was removed. Three weeks after this, the wound was healed, but the bones had not united properly.

When the arm was examined, a large cicatrix was noticed over the middle third of the bones of the forearm; it was adherent to the ulna for a short distance, but was otherwise free. Both bones were movable at the junction of their middle and lower thirds, but the radius less so than the ulna. The ulna was not only quite ununited, but was deficient for about one inch at the seat of fracture, the result, no doubt, of the necrosis which had followed the injury. The fractured ends of the ulna were displaced towards, and adherent to, the radius. Pronation and supination could not be performed, and the arm was also weak, and, in consequence, useless.

On June 27th, I performed the following operation, with the hope of making the arm more useful. An incision, about three inches long, was made over the dorsal aspect of the ulna, so as to expose the fractured portion of this bone. It was then found that the fractured ends were rounded off and atrophied, and united to one another and to the radius by some strong fibrous texture. These ends were also displaced inwards, and there was fully an interval of an inch between them owing to the deficiency of the bone.

The condition of the bones is illustrated diagrammatically in Fig. 1, the dotted lines at A A and B B showing the amount of bone removed from the radius and ulna at the operation.

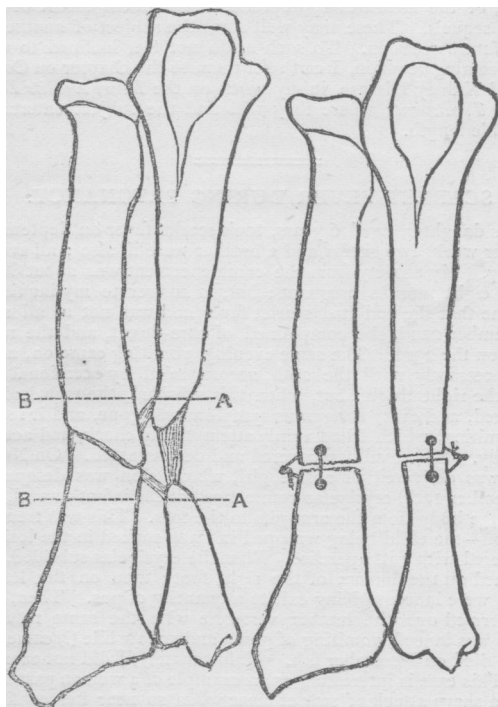


Fig. 1.

Fig. 2.

About a quarter of an inch was now sawn off the ends of the ulna; and, as it was quite evident that these ends could not be brought together, a second incision was made over the dorsal aspect of the radius, and

a portion of this bone, including the partially united part, was also sawn off. By thus shortening the radius to a sufficient extent, the ends of the ulna were allowed to meet, the adhesions connecting them to the former bone having been divided. The ends of both bones were then drilled, and secured with strong silver wire, as shown in Fig. 2. The edges of the wounds being brought together with a few carbolised silk sutures, antiseptic muslin was applied in the usual way, and the arm adjusted on a splint. On the 3rd of July, it is noted that the patient has progressed favourably since the operation, and the wound is healing well. On the 8th of July, the wire through the ends of the ulna being a little loose, was twisted more firmly. The patient's progress continues good.

On the 3rd of August, the wounds were quite superficial, and the wire through the ends of the radius being quite loose, was removed. On the 13th of August, the wire was removed from the ulna; and on the 29th, the patient left the hospital, the wounds being almost healed.

Six weeks after this, he returned to show himself, when it was found that the bones were firmly united. The forearm, to a limited extent, could be pronated and supinated; but these and the other movements of the arm were steadily improving, and the limb could already be used in many ways, its strength being greatly improved since the operation.

Remarks.—For the successful treatment of this case, it was necessary to overcome two principal obstacles. These were: (1) the deficiency of the ulna; (2) the displacement inwards of the ends of the ulna, and their adhesion to the radius. In addition, the large cicatrix forming the chief covering of soft parts over the injured bones made operative interference more difficult than if these coverings had been sound. The first of these obstacles was successfully overcome by removing a portion of the radius, so as to allow the ends of both bones to be brought together. The removal of this portion of bone by diminishing the amount of the osseous element of the forearm also permitted the contraction of the wounds in the soft parts to take place satisfactorily. The second obstacle was successfully combated by dividing the adhesions, drilling the ends of both bones, and securing them with strong wire, as shown in Fig. 2.

This method of securing the fractured ends would, I believe, prove very valuable in many cases of recent compound fracture of the bones of the forearm. It is a most efficient means of preventing their inward displacement, and therefore assists much in preventing also the union of the radius and ulna to one another, a condition not easy to overcome in this class of injury. The wire which I employ in this and other operations of the kind is silver, of the thickness of that usually employed to secure the corks of soda-water bottles. The instrument used for drilling the bone is a joiner's common small pricker. Having tried more complicated instruments for this purpose, I have now a decided preference for the more simple tool, which I always find to be most efficient.

MALARIA: REPLY TO DR. INMAN.

By W. C. MACLEAN, C.B., M.D., Surgeon-General,
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ALTHOUGH I have no intention of entering into a controversy with every member of the profession who happens to believe there is no such entity as malaria, I must ask to be allowed space for a few words on the not very courteous article of Dr. Inman.

1. The candid confession with which his letter opens, that he has no personal experience of the subject on which he writes so confidently, was hardly necessary; the fact is sufficiently apparent in his letter.

2. I beg to say that I did not "attack" Dr. Oldham. This gentleman published a book, in which he put forth certain opinions, the accuracy and scientific value of which I have called in question: a very different thing from "attacking" their author.

3. When Dr. Inman, in effect, asserts that I have not read his friend's book, he is in error. Dr. Oldham was kind enough to send me a copy of his work when it issued from the press, when I not only read it with care, but, without loss of time, communicated to its author, as well as I could within the limits of a letter, the grounds on which I differed from his conclusions.

4. Dr. Inman has evidently no knowledge of what I have elsewhere written on malarious fevers, if he supposes that I am ignorant of the notorious fact that paroxysmal fevers are seen in some localities where there are no marshes, and in ships at sea. In the first instance, water is often found at no great distance from the surface, and the apparently barren soil has been found to abound in organic matter; to the above conditions add high temperature, and we have the factors needful for the genesis of the poison of malaria. In other cases, where such fevers have been found to prevail on rocky places with scanty or no