CASE REPORT

Tendon interposition in boxer’s fracture, an unusual cause of non-union and extensor dysfunction of the little finger

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Introduction

Fractures of the neck of the fifth metacarpal, known as boxer’s fractures, are the second commonest fracture in the hand.1 Non-union and delayed union of the tubular bones of the hand are uncommon.2 We report the first case of a non-union of a boxer’s fracture due to tendon interposition.

Case presentation

A thirty-two-year-old right handed man presented 6 weeks following an injury to his right hand sustained by punching a wall. On examination the little finger was held in 45° flexion and the patient was unable to extend the little finger. Radiological examination revealed an ununited fracture of neck of fifth metacarpal (Fig. 1). There was minimal shortening and dorsal angulation of 40° at the fracture site. On exploration the extensor digitorum tendon was found interposed in the fracture site and there was marked scarring of the tendon. The tendon was released, the bone ends were freshened and the fracture was stabilised with a single K wire. At 2 months the fracture had united (Fig. 2A and B) with satisfactory hand function and minimal residual extensor lag of the little finger.

Discussion

Common complications of metacarpal fractures include malunion, tendon adhesions and intrinsic muscle dysfunction.4

Non-union of tubular bones of hand is rare and non-union of a boxer’s fracture virtually never occurs.1,4

Figure 1 Non-union of neck of the fifth metacarpal.
Non-union and delayed union of metacarpal fractures are associated with open fractures, bone loss, significant crushing force, poor fixation and osteomyelitis.\textsuperscript{2,4} Non-union due to tendon interposition in boxer’s fracture has not been previously reported.

Metacarpal neck fractures are generally treated conservatively; up to 60° angulation in the fifth metacarpal is acceptable. Operative management of metacarpal neck fractures is indicated when there is rotational deformity or significant angulation with pseudoclawing. In the absence of these deformities metacarpal neck fracture produce minimal if any functional problems. Early surgical exploration may also be necessary if there is suspicion of any tendon involvement.

**Conclusion**

Significant extensor lag of the little finger associated with a boxer’s fracture should raise the suspicion of extensor tendon interposition. Delay in surgical intervention may result in delayed or non-union of the fracture and persistent extensor tendon dysfunction.

**References**