

An Isolated Fracture of The Humeral Trochlea in A Tennis Player: A Rare Fracture Not to be Ignored

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Abstract

Case Report

Fractures of the trochlea are very rare [1]. therefore the diagnosis is based on clinical and radiology especially incidence of profile. Their initial care must be early and effective because of the risks generated on the elbow: rigidity, instability, osteoarthritis [2]. Our patient, a sports accident victim (tennis player) was operated urgently by internal first, open reduction and stabilization by buried Herbert screw.

Keywords: Fracture, trochlea, herbert screw.

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INTRODUCTION

The isolated fracture of the trochlea is a very rare joint fracture of the lower end of the humerus [3].

We report the observation of a 25-year-old tennis player with an isolated fracture of the humeral trochlea.

OBSERVATION

He is a 25-year-old tennis player; no history of pathology falling from height during regional competition; with reception on the left hand elbow in extension causing a pain with total functional impotence of the upper left limb.

The examination showed a swelling of the elbow with pain on palpation and mobilization without skin lesion or vasculo-nervous deficit.

The radiograph of the left elbow face and profile showed a fracture of the lower extremity of the humerus and the CT revealed an isolated fracture of the trochlea.

The patient was admitted to the block, using a medial approach of the elbow trochlea was reduced and fixed by two screws of Herbert. The elbow was immobilized for 4 weeks followed by rehabilitation of the elbow.

Six months after the trauma there is a very good functional result with a stable and painless elbow and a very satisfactory mobility with a return to his tennis club.



A radiograph and profile showing the fracture of the trochlea; C and D: appearance of the trochlear fracture on 3D TDM; E and F: frontal radiograph and profile showing the assembly and the reduction by 2 herbert screws

DISCUSSION

The isolated fracture of the trochlea is very rare. The causes described in the literature and also for our patient are the falls on the elbow in extension. As in our case, the front x-ray may be normal [4, 5]. The diagnosis is thus posited by the profile [6] snapshots that show a fragment in the form of a "crescent moon" detached from the humeral condyle. A CT with possible reconstruction can be performed for the study of fragment size and operative planning [1, 5, 7-9].

The treatment consists of a more anatomic open reduction and stabilization by 2 buried Herbert screws, thus allowing a better compression. A "testing" of the mobilities was done peroperatively, thus evaluating the congruence. A wide variety of internal stabilization techniques have been described as Kirschner wires [10], biodegradable pins, staples, bone clips, and compression screws. The pins do not offer a strong compression and stabilization of the fracture site. Most of these methods require a long period of postoperative immobilization which interferes with early functional recovery. Herbert's screws have the advantage of being buried so as not to irritate the soft

tissues [11]. There is no need for removal of the screw from where the rehabilitation program starts earlier and functional recovery is faster.

CONCLUSION

The isolated fracture of the humeral trochlea is a very rare entity whose Open reduction and internal fixation are the treatment of choice for trochlear fracture. The stabilization by screw of Herbert which is a modern method gives satisfactory results because it allows a strong inter-fragmentary compression, an early mobilization, and thus of the functional recovery of the elbow. Ablation of osteosynthesis equipment is rarely necessary.

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