

Synchronous Trochlear and Radial Neck Fracture without Elbow Dislocation

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INTRODUCTION:

Trochlea fracture is a sparsely reported. We discuss our management is a patient with trochlear fracture and undisplaced radial neck fracture.

REPORT:

Female, 30s, elbow pain after a fall. Denies elbow dislocation/relocation event.

Examination: Tender medial and lateral elbow with pain restricting motion. Neurovascular examination unremarkable.

Imaging: Displaced coronal fracture of trochlea and undisplaced radial neck fracture.

Medial elbow exposed using the FCU split. Fracture fixed with cannulated screw. Post fixation, examination under anaesthesia showed no gross varus/valgus instability with normal pronation/supination motion.

Fluoroscopy showed undisplaced radial neck fracture with normal radiocapitellar joint.

Post-operatively, 2 weeks on armling. Last follow up, fractures united, ROM normal except 15 degrees extension deficit.

DISCUSSION:

The first description of an isolated fracture of the humeral trochlea was in 1853 by Laugier, thus sometimes known as Laugier's fracture. The trochlea rarely fractures in isolation, because there's no muscular or ligamentous attachments and ulnohumeral joint is not subject to shear forces that occur at the radiocapitellar joint. Trochlea fractures usually accompany elbow dislocations with concomitant ligamentous injuries or capitulum fractures(1). In a lateral view radiographs, appearance of articular half-moon-shaped fragment moved up and forward could suggest a capitellar fracture. For this reason, diagnosis is based on the results of a CT scan.

The trochlear fragment can be reached through medial or anterior approaches. The medial approach was the most common one among all

of the cases that had been reported as he offers a more direct approach. Most common fixation method is using screws. However pinning can be considered in children and excision of fragment if it's too small(2).

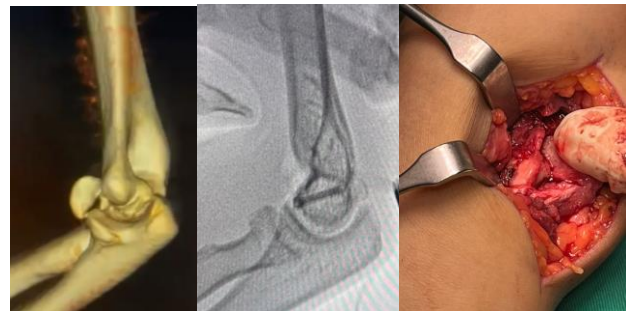


Figure1(left): CT scan showing trochlea fracture

Figure2(middle): Intraoperative image intensifier showing fracture heal with headless screw

Figure3(right): Intraoperative image showing medial FUC split approach with fracture reduction and screw in-situ

CONCLUSION:

Synchronous fracture of the trochlea and radial neck without an elbow dislocation is rare. The mechanisms generating this fractures are complex. We recommend open reduction and internal fixation for displaced fractures.

REFERENCES:

1. Najib et al, 2015, Journal medical case reports
2. Sumarwoto et al, 2020, Int Jour Case Rep