

A Rare Case of Paediatric Olecranon Osteochondral Flap Fracture (POOFF), Neglected and Posing a Disastrous Outcome - A Case Report

¹Munira Masri, ²Kamariah Nor, ³Warren Erwin Nicholas, ⁴SM Faisal Amir

Department of Orthopaedic and Trauma Surgery, Tengku Ampuan Afzan Hospital, 25100, Kuantan, Pahang, MALAYSIA.

INTRODUCTION:

Paediatric Olecranon Osteochondral Flap Fracture (POOFF) is a rare injury and was first described as a shear injury in which an articular cartilaginous flap is elevated from the subchondral bone of the semilunar notch of the olecranon. This uncommon injuries through the unossified part of elbow, are relatively difficult to diagnose and are not routinely appreciated on radiograph. These lesions may lead to serious long-term complications if missed.

REPORT:

We reported a case of 7 years old boy, who had an alleged fall while playing on a monkey bar. Post trauma he sustained pain and swelling of left elbow. Delayed diagnosis of Olecranon Osteochondral Flap Fracture has been made at 6 weeks of trauma due to overlook in detecting an intracapsular fragment on plain radiographs at initial presentation. Patient had fixed flexion deformity of 90 degrees, supination at 90 degrees and pronation at 60 degrees. Left elbow radiograph shows a large osteochondral fragment with fractured olecranon (Figure 1). CT scan and MRI revealed a curved chondral fragment within the elbow joint with elbow joint effusion and marrow edema.

Patient then underwent Arthrogram, Open Reduction and Joint Exploration, Removal of Chondral Fragment and Manipulation Under Anaesthesia of the left elbow via lateral approach. Intraoperative revealed a large chondral fragment over the posteroinferior aspect of capitellum measuring 2.5cmx1.5cm (Figure 2) with fibrous tissue in joint space. Patient was then scheduled for aggressive physiotherapy for ROM elbow. During follow up at 1 month post op, patient had very limited ROM at about 35 to 80 degrees with minimal pain upon motion.



Figure 1: A plain elbow radiograph shows small intraarticular bone fragment and irregularities of olecranon surface which signifies fractured olecranon



Figure 2: Large chondral fragment measuring 2.5cmx1.5cm

CONCLUSION:

The rarity of this injury and difficulties in identifying subtle articular cartilaginous flap from the subchondral bone has resulted in delayed diagnosis and harmful complications to patients.

REFERENCE:

1. Kim, D.C., Cutchen, W., Teachey, W., Brewer, J. and Nimityongskul, P., 2021. Pediatric olecranon osteochondral flap fractures with subtle radiographic abnormality. *The Journal of Hand Surgery*, 46(2), pp.155-e1.