

### A Rare Case of Capitellum Fracture in an Adolescent

Zaharudin MF, Toyat SS, Abdul Rashid MA, Arsad SR, Muhammad Nawawi RF  
Hand and Microsurgery Department, Hospital Selayang, Selangor

#### INTRODUCTION

Capitellum fractures are rare in children and adolescents, accounting for less than 1% of all elbow fractures<sup>1</sup>. We present the case of an isolated capitellum fracture in a 15 year-old girl.

#### CASE REPORT

She presented with right elbow pain and limited range of motion after sustaining a direct blow to her elbow during sports (silat). Radiograph of the right elbow showed a fracture of the capitellum of the humerus. CT scan was subsequently obtained to aid pre-operative planning.

Open reduction and screw fixation was done via Kocher approach. Intra-operatively, there was an osseous fragment measuring 2.5x2.5cm overlying the right capitellum, with otherwise no comminution. The fragment was reduced under direct visualisation, and fixed with 2 headless 3.5mm cannulated screw inserted anteriorly to posteriorly. Post-operation, the right upper limb was immobilised with above elbow back slab for 1month.



Figure 1: Kocher approach

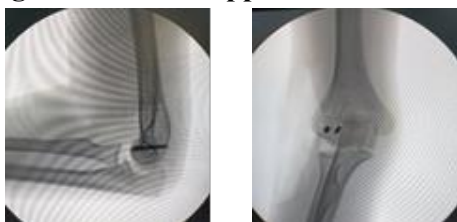


Figure 2: Intra-operative images

#### DISCUSSION

Capitellum fractures in paediatric patients are rare and challenging to diagnose. There should be a high index of suspicion for these fractures if the mechanism of injury involves compression or shear by the radial head on the capitellum<sup>2</sup>, as can occur in a fall on an outstretched hand, or as in this case, by direct blow to the elbow in flexion. In 2017, Murphy et. al. introduced a classification system for paediatric capitellum fractures; type-1 anterior shear injuries of the capitellum, as in this case, being the most common compared to type-II and type-III.<sup>1</sup>

#### CONCLUSION

Prompt diagnosis and management of capitellar fractures is needed to restore articular congruity, range of motion and joint stability in paediatric population. Headless screws represent an option of stable internal fixation in these fractures.

#### REFERENCES:

1. Murthy P.G. Et al. (2017). Capitellar Fractures in Children and Adolescents: Classification and Early Results of Treatment. The Journal of bone and joint surgery. American volume, 99(15)
2. Brandon Et al. (2019). Pediatrics Tips & Tricks: Management of Pediatric Capitellar Fractures. VOLUME29