

Closed Capitellum Fracture: An Anterolateral Approach in a Rare Case

¹Ong RL; ¹Aizat S; ¹Hadizie D

¹Orthopaedic Department, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan.

INTRODUCTION:

Capitellum fractures are rare fractures that can occur in all age group but mostly in elderly with low energy trauma. These fractures are commonly managed with open reduction and internal fixation using lateral approach. However, there are other approaches that can be utilized. Here, we report a case of young patient with capitellum fracture, which was fixed using isolated screw fixation via anterolateral approach to elbow.

REPORT:

We present a healthy 14-year-old boy who fell on his left elbow while riding bicycle. Plain radiography and CT scan showed left capitellum fracture extending to trochlear (Bryan and Morrey classification with McKee modification type VI). We proceeded with open reduction and screw fixation of left capitellum via anterolateral approach.

Both brachial vein and radial nerve were identified and protected throughout surgery. The fracture fragment was able to reduce under direct visualization. Three headless compression screws were inserted from anterior-to-posterior direction perpendicular to the fracture line to achieve fracture compression. Prior wound closure, the elbow joint was stable and able to achieve full range of motion.

Post operatively, the elbow was splinted in 90° flexion for two weeks, then active range of motion exercises were started. At 6 months post-operation, patient was able to achieve good elbow function and fracture union with no post-operative complications.

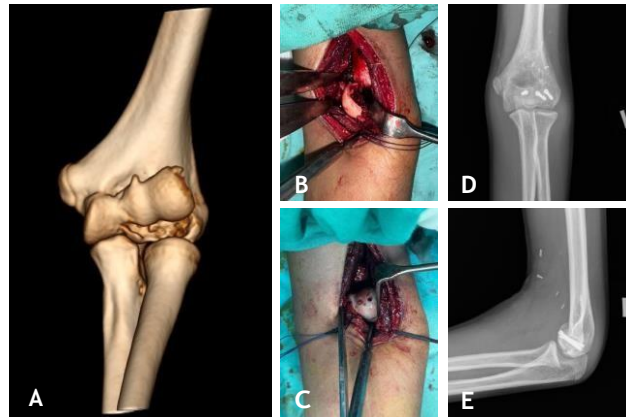


Figure 1: Pre-operative CT elbow (A). Intraoperative picture of fracture and fixation (B, C). Post-operative elbow x-ray (D, E)

CONCLUSION:

Anterolateral approach to elbow joint should be considered in capitellum coronal shear fracture without posterior comminution as it allows direct access to fracture site for a stable fracture fixation with shorter duration of surgery and similar outcome as compared to lateral approach. Injuries to radial nerve are rare when soft tissue is handled meticulously.

REFERENCES:

1. Watson, J. J., Bellringer, S., & Phadnis, J. (2020). Coronal shear fractures of the distal humerus: current concepts and surgical techniques. *Shoulder & Elbow*, 12(2), 124-135.