

Gun Stock Deformity in Physeal Arrest of Medial Condyle Humerus Following A Supracondylar Humerus Fracture: A Case Report

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INTRODUCTION:

A supracondylar fracture of the humerus is the most common elbow injury in children¹. Gun stock deformity is the most frequent late complication due to malunion. However, partial growth arrest of the medial condylar physis is occasionally reported². We present a case report of a gun stock deformity secondary to medial condyle physeal arrest following a supracondylar humerus fracture, which underwent corrective osteotomy.

REPORT:

A 9-year-old boy who had sustained three different occasions of right elbow injury since he was three years old, presented with worsening of right elbow deformity for 2 years. His first injury was at 3-years-old, believed to be supracondylar humerus fracture, which was treated with CMR and K-wiring which was claimed to heal uneventfully. Another injury was at 6- and 9-years-old in which he was treated conservatively with cast. The exact diagnoses were unsure; however, the deformity of the right elbow was noted after cast removal at 9-years-old after a period of immobilisation. Patient denies any pain or numbness and has no limitation of daily activities. Clinical examination showing carrying angle of 15-degree varus with limitation in flexion and pronation, and internally rotated. Neurological examination was normal.

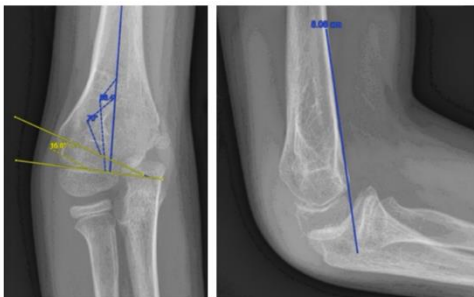


Figure 1: Plain radiographs showed Baumann angle of 86 degree and AHL does not pass through the capitellum.

Patient underwent lateral closing wedge corrective osteotomy of the distal right humerus. Osteotomy rule number 2 was used in this surgery as the CORA is located at the olecranon fossa.

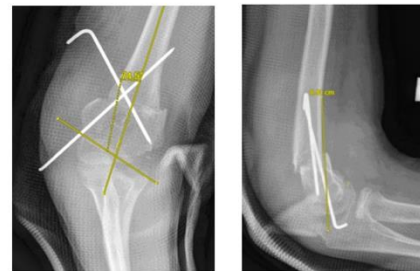


Figure 2: Post-operative plain radiographs showed Baumann angle corrected to 74.5 degree and AHL passed through the capitellum.

Following the osteotomy, the anatomical alignment of the right elbow was restored. Post operatively, carrying angle of the right elbow is 10 degrees with full range of motion. Post operative neurological assessments were intact.

CONCLUSION:

Medial physeal arrest is not an uncommon complication following a supracondylar humerus fracture. Worsening of cubital varus should be anticipated as the child grows, therefore, surgical intervention is an option to correct the deformity.

REFERENCES:

1. Shoaib, Muhammad, et al. "Percutaneous pinning in displaced supracondylar fracture of humerus in children." *Journal of Ayub Medical College Abbottabad* 16.4(2004).
2. Brubacher et al. "Pediatric Supracondylar Fractures of the Distal Humerus." *Current reviews in musculoskeletal medicine*, 2008 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2682409/#CR27>