

Malunited Supracondylar Humerus Fracture with Radial Nerve Entrapment

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INTRODUCTION:

Extension type supracondylar humerus fracture is one of the most common fractures in children, up to 20% have neurological involvement. Most nerve injuries recover spontaneously.

REPORT:

We report a case of a 6-year-old girl malunited supracondylar humerus fracture from a fall. She presented 7 weeks post-trauma. Main complaints were worsening deformity and progressive weakness of her wrist. Clinically, painless bony deformity in her right arm, ROM 30°-45°, elbow extension grade 4 but there was wrist and finger drop with no sensory deficit. Other peripheral nerve function and distal pulses doppler signal were good. Radiologically, malunited distal fragment adhering to the posterior humerus at the spiral groove.



Figure 1: Right elbow CT 3D reconstruction.

We offered deformity correction with exploration of the radial nerve. Exposure using a posterior to lateral approach, traced radial nerve from the spiral groove to the bony malunion. The nerve was entrapped within fracture callus. We released the nerve from the callus, it was severely thinned out and neurolysis performed. The proximal segment of the distal humerus was shortened to accommodate soft tissue contracture. The corrective osteotomy was fixed with 3 1.8mm Kirshner wires. Post operative period remains uneventful.

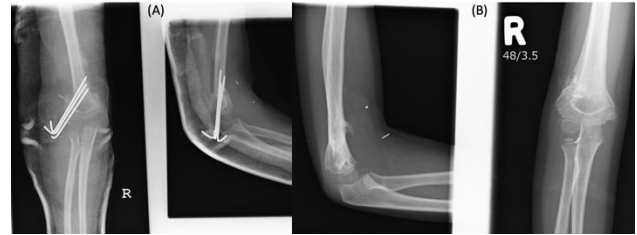


Figure 2: (A) postoperative x-ray, (B) 5-months postoperative

The k-wires were kept for 6 weeks with a splint, and subsequently removed and physiotherapy initiated. 5 months post-operatively, she achieved full ROM of the elbow joint, wrist and finger drop resolved, MRC grade returned to normal.



Figure 3: Clinical picture 5 months postoperative.

CONCLUSION:

Corrective osteotomy with shortening of the humeral shaft stabilized using k-wire fixation is a reliable method in managing malunited distal humerus fractures in pediatrics.

REFERENCES:

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