

Post-traumatic elbow stiffness and high lesion ulnar nerve palsy in a teenager : A rare case report

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INTRODUCTION:

Post-traumatic elbow stiffness can be divided into intrinsic, extrinsic, or mixed causes. High lesion ulnar nerve palsy usually associated with pathology at the level of elbow. Here I presented a case of intraarticular displaced medial ridge of trochlear notch with elbow joint subluxation and cubital tunnel syndrome.

REPORT:

14 years old healthy gentleman, fell on outstretched hand in December 2022 and sustained pain and swelling over the left elbow. Upon examination, tenderness over distal humerus with limited range of motion, able to move fingers with intact sensation. He was treated as supracondylar fracture and immobilised in an above-elbow backslab with elbow held in 90° for 3 weeks. Subsequent visit to clinic, noted high lesion ulnar nerve palsy with elbow fixed flexion at 90°. Retrospective studied of the elbow x-rays shown bony fragment at the humeroulnar joint causing subluxation (Figure 1A). Further imaging studied was conducted to evaluate the origin of bone fracture fragment and the ulnar nerve together with the elbow joint. The CT scan show that medial ridge of trochlear notch fracture and displaced intraarticularly (Figure 2A), humeroulnar subluxation. While MRI reviewed the thickened fibrous cubital tunnel with ulnar nerve in continuity (Figure 2B), collateral ligaments were intact. Decision of surgery was made as it is a big intraarticular fragment causing elbow subluxation. A medial approach with medial collateral ligament cut and repaired, to address the loose bony fragment and the callus which cause mechanical block to the elbow motion. A cubital tunnel release with transposition of the ulnar nerve was done to

decompress of the nerve. Intra-operatively, range of motion improve from 10-130°. Post-operatively, he was put on elbow brace and immediate active range of motion exercise of the elbow was conducted. Prophylaxis indomethacin was started to prevent heterotopic ossification.



Figure 1: Pre-operative X-ray (A) and post-operative X-ray (B)

Figure 2: CT scan (A) and MRI (B)

CONCLUSION:

Elbow stiffness is major cause of functional impairment after elbow trauma, with ulnar nerve palsy may make the physiotherapy even difficult. Non-concentric reduction warrant further investigation. The treatment may include operative and non-operative depending on the pathology. Physiotherapy remain the mainstay of treatment to determine the outcome of surgery.

REFERENCES:

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