

Elbow's Nerve of Steel: A Complex Case Of Fracture Dislocation and Ulnar Nerve Impairment

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INTRODUCTION:

This case report illuminates the clinical journey of a 13-year-old female patient confronting the complexities of elbow dislocation accompanied by ulnar nerve impairment. Our treatment protocol embraced a comprehensive strategy, encompassing closed reduction initially, then medial condyle magnesium screw fixation, and ulnar nerve transposition.

REPORT:

A 13-year-old girl arrived at our facility after falling into a drain. The injury occurred when she fell onto her outstretched hand and semi-flexed elbow.

Presenting with the distinctive "claw hand deformity," she exhibited diminished sensation in the ring and little fingers. Despite the absence of cutaneous wounds, the other digits showed normal movement. A plain radiograph unveiled the alarming findings of elbow dislocation compounded by a fracture of the medial epicondyle humerus.



Figure 1: Radiograph showing right elbow dislocated medially

As initial management, closed reduction was done, and the patient was put on posterior slab.

Operative intervention was conducted one month after the trauma. We initiated the



FIGURE 2 : : Noted ulnar nerve was marked with an elastic band.

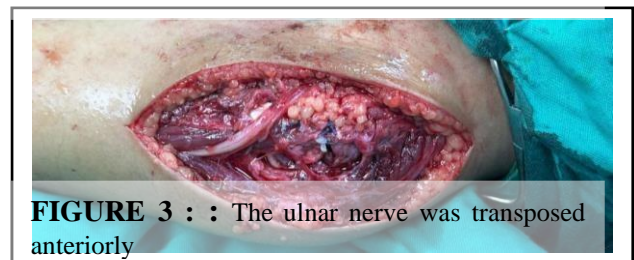


FIGURE 3 : : The ulnar nerve was transposed anteriorly

procedure with open reduction through a medial elbow approach, followed by reattachment of the medial condyle fragment using a biodegradable magnesium screw. Subsequently, we explored the ulnar nerve and confirmed its visual continuity. The ulnar nerve was transposed anteriorly to prevent potential entrapment or irritation by the medial epicondyle.

After a 3 month follow-up, the patient no longer exhibited ulnar claw deformity. The ROM of the elbow had improved, with the patient able to achieve a range of 0 to 120 degrees.

CONCLUSION:

Surgery is warranted for elbow dislocation with medial humeral epicondyle fracture and ulnar nerve injury. Further randomized controlled trials are essential to determine the optimal management approach.

REFERENCES:

1. R. C., D. Naidu, T. G., & A.D. R. (2023). Medial Humeral Epicondyle Fracture Incarcerated Into the Elbow Joint in an Adolescent Patient With Ulnar Nerve Palsy. Cureus. doi:10.7759/cureus.34502.