Original Research Paper

Volume - 16 | Issue - 07 | July - 2026 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Orthopaedics

ANTERIOR DISLOCATION OF ELBOW WITH FRACTURE OF MEDIAL EPICONDYLE: A RARE CASE REPORT

Dr. Raghavendra R	Post Graduate, Department of Orthopaedics, Al- Ameen Medical College, Vijayapura
Dr. Darshan C	Post Graduate, Department of Orthopaedics, Al- Ameen Medical College, Vijayapura
Dr. Prakash A Sasnur	Professor, Department of Orthopaedics, Al- Ameen Medical College, Vijayapura

ABSTRACT **Introduction:** Anterior elbow dislocation is a rare occurrence, mostly produced by direct blow to the back of the flexed elbow or forcing the forearm bones (ulna and radius) to shift forward relative to the upper arm bone (humerus). Posterior dislocation is the commoner entity at the elbow joint, thus rarity of this case incites reporting. **Case Report:** A 35 year old female presented to our casualty around 7:30 pm with complaints of pain, swelling and inability to move her left upper limb following twisting Injury to left forearm, on examination swelling and deformity was visualised over the left elbow and on palpation tenderness was elicited over the left medial condyle, range of motion was painful and restricted, no associated neurovascular deficit. Radiological investigations confirmed Anterior dislocation of left elbow joint with medial epicondyle fracture. Dislocation was reduced under general anaesthesia and medial epicondyle fracture was stabilized with open reduction internal fixation with CC-Screw. **Conclusion:** Anterior dislocation of elbow is a rare occurrence with frequent association with periarticular fractures and neurovascular injury. Therefore, a careful assessment followed by the early proper reduction and management leads to better functional outcome.

KEYWORDS : Elbow Joint, Anterior Dislocation, Medial Epicondyle.

INTRODUCTION

Traumatic anterior elbow dislocation is an uncommon rare injury [1,2]. It is usually associated with periarticular fractures [3,4] or neurovascular deficit [5]. The aim of the treatment is to provide a good clinical and functional outcome with concentric reduction, good fixation of periarticular fractures with adequate soft-tissue handling with best available methods [6,7,16]. Till now, very few cases of anterior elbow dislocation are reported in the literatures and are usually associated with neurovascular or ligamentous injury.

Case Report

A 35 year-old female presented to emergency department with complaints of pain, swelling, and deformity around the left elbow joint with inability to move his left elbow. She came with alleged history of assault by twisting Injury of left forearm. On presentation, she was holding her left elbow semiflexed and supported by opposite hand. On examination, his elbow was at 30° flexed attitude, forearm in mid-prone position, swelling and tenderness was observed around the left elbow. The three point relationship of the left elbow was lost. Olecranon was not palpable posteriorly; there was increased tenderness on palpation over medial condylar region. The range of motion around the left elbow was painful and restricted without any distal neurovascular deficit. Radiological examination (X-Ray) revealed anterior dislocation of the left elbow with medial epicondyle fracture of humerus.

Figure 1: Pre-op X Ray of Left Elbow

A posterior longarm slab was given, and the patient was advised for limb elevation. Then, we planned for reduction of the dislocation and fracture fixation under general anesthesia. Close reduction of the elbow joint was achieved by applying longitudinal traction in line of supine forearm with the elbow in 60–70° flexion. With the assistant giving counter traction in line of the humerus, the elbow was taken into mild valgus, the forearm was pushed backward, and the elbow reduced with a clunk.The medial epicondyle was fixed with open reduction and C C screw fixation. The fixation was confirmed with the help of image intensifier. A forearm pouch was given to the patient and advised for limb elevation in the post-operative ward. The patient was discharged on post-operative day 5 after wound inspection and advised for non-weight lifting. The patient was followed up after 1 month. Elbow arc of motion encouraged with active physiotherapy, following after a period of 3-month elbow range of motion, was found 30–100°. He was advised further physiotherapy.

DISCUSSION

Anterior elbow dislocation is among the rarest of the injuries in contrast to posterolateral elbow dislocation, which is a common occurrence and is usually associated with periarticular fractures [1]. Majority of the reported cases had associated fractures of olecranon, medial and lateral epicondyle, and radial head [2-5]. The mechanism of injury described in various literatures are that, it may occur due to a direct trauma to posterior aspect of ulna with elbow in mid flexed position [3] or may be due to sudden pull on forearm [1]. We believe that the mechanism may be due to sudden pull of forearm with twisting force acting axially, explaining anterior dislocation with medial epicondylar fracture [4-10]. The elbow joint owes its stability to the ulnotrochlear articulation and collateral ligament complexes which are its primary static stabilizers. The radial head, joint capsule, common flexor, and extensor origin which are the secondary static stabilizers and anconeus, triceps, brachialis muscles act as the dynamic stabilizers [4, 11]. The posterior column is formed by the olecranon, the triceps, and the posterior aspect of capsule. This explains the rare occurrence of anterior elbow dislocation. To have anterior dislocation, the disruption of the posterior column is necessary [8, 12]. The clinical picture in acute anterior elbow dislocation found to be, elbow in a flexed attitude, pain, swelling, deformity, range of motion restricted by pain, and usually associated with soft-tissue injuries [7].

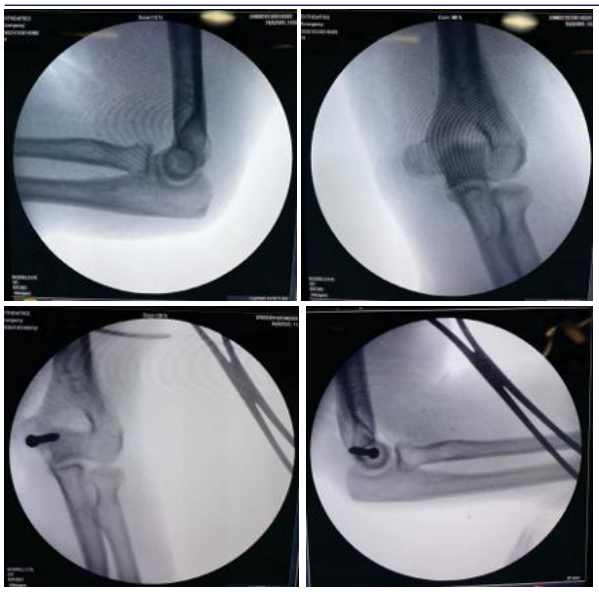

Figure 2: Intra-op C-arm Images

This case report is that of closed anterior dislocation with medial epicondyle fracture humerus without any neurovascular deficit. Anterior dislocation mostly occurs with fracture olecranon dislocation with medial epicondyle that is also a known entity, which is more common than lateral epicondyle [8, 13]. Mostly, the underlying mechanism is pull and twisting force at the level of elbow and to wrist. After initial evaluation, the patient was treated by closed reduction of elbow joint with medial epicondyle fracture fixation with the help of C C screw [16]. Medial epicondylar fractures are traditionally treated conservatively which leads to fibrous union rather than bony union [14]. Here, we have fixed the fragment to prevent severe chronic medial instability although it rarely occurs with fibrous union [8]. We followed the reduction maneuver of gentle traction to the forearm, the posterior and downward pressure is applied to the forearm with gentle anterior pressure on the distal humerus, and the method opposite to the reduction maneuver for posterior elbow dislocation [2].

Figure 3: Intra-op Images

CONCLUSION

Anterior dislocation of the elbow with medial epicondyle fracture is an extremely rare injury that requires prompt diagnosis and careful clinical assessment. Early reduction of the dislocation along with stable fixation of the fracture plays a crucial role in restoring elbow stability and function. This case highlights the importance of evaluating associated periarticular fractures and neurovascular status in such injuries. Proper surgical management combined with physiotherapy can lead to satisfactory functional recovery. Timely intervention and rehabilitation are essential for achieving better long-term outcomes in these uncommon elbow injuries.

Figure 4: Post-op X Ray

Footnotes

Conflict of Interest: Nil

Source of Support: Nil

Consent: The authors confirm that informed consent was obtained from the patient for publication of this case report

REFERENCES

1. Nema SK, Behera G, Poduval M. Neglected anterior dislocation of the elbow joint:Case report of a rare injury. Malays Orthop J. 2018;12 doi: 10.5704/MOJ.1807.016. [DOI] [PMC free article] [PubMed] [Google Scholar]
2. Kailash S, Shanmuganthan S. Anterior dislocation of elbow with neurovascular injury:A rare case report. J Orthop Case Rep. 2017;7:91–4. doi: 10.13107/jocr.2250-0685.704. [DOI] [PMC free article] [PubMed] [Google Scholar]
3. Wu Y, Jiang H, Miao W. A case report of children's divergent dislocation of the elbow and review of literature. Medicine (Baltimore) 2016;95:e4772. doi: 10.1097/MD.0000000000004772. [DOI] [PMC free article] [PubMed] [Google Scholar]
4. Vijayan S, Chalappurath V, Jose S, Rao SK. Anterior elbow dislocation without fracture in an adult:A rare injury pattern. BMJ Case Rep. 2019;12:e230115. doi: 10.1136/bcr-2019-230115. [DOI] [PMC free article] [PubMed] [Google Scholar]
5. Dhar S, Kale SY, Singh S, Gunjotikar AR, Koli V, Sharma S. Multiple Cantilever K-wiring technique for severely comminuted articular fragments in neglected distal humerus fracture with anterior elbow dislocation:A case report. J Orthop Case Rep. 2022;12:22–5. doi: 10.13107/jocr.2022.v12.i01.2600. [DOI] [PMC free article] [PubMed] [Google Scholar]
6. Dimantha WH, Pathinathan K, Shivakumaran D, Gunawardena PM, Madushanger SR, Wijesinghe S. Pediatric anterior elbow dislocation due to a rare mechanism of injury:A case report. Int J Surg Case Rep. 2021;85:106210. doi: 10.1016/j.ijscr.2021.106210. [DOI] [PMC free article] [PubMed] [Google Scholar]
7. Bouaziz W, Guidara AR, Trabelsi A, Bardaa T, Hammami M, Ellouz Z, et al. Anterior transolecranon dislocation of the elbow in a child:A case report and review of literature. World J Orthop. 2018;9:100–4. doi: 10.5312/wjo.v9.i7.100. [DOI] [PMC free article] [PubMed] [Google Scholar]
8. Kumar R, Sekhawat V, Sankhala SS, Bijarnia I. Anterior dislocation of elbow joint-case report of a rare injury. J Orthop Case Rep. 2014;4:16–8. doi: 10.13107/jocr.2250-0685.186. [DOI] [PMC free article] [PubMed] [Google Scholar]
9. Leung KS, Shen WY, Leung PC, Kinninmonth AW, Chang JC, Chan GP. Ligamentotaxis and bone grafting for comminuted fractures of the distal radius. J Bone Joint Surg Br. 1989;71:838–42. doi: 10.1302/0301-620X.71B5.2584256. [DOI] [PubMed] [Google Scholar]
10. Søjbjerg JO, Helmig P, Kjaersgaard-Andersen P. Dislocation of the elbow:An experimental study of the ligamentous injuries. Orthopedics. 1989;12:461–3. doi: 10.3928/0147-7447-19890301-18. [DOI] [PubMed] [Google Scholar]
11. Robinson PM, Griffiths E, Watts AC. Simple elbow dislocation. Shoulder Elbow. 2017;9:195–204. doi: 10.1177/1758573217694163. [DOI] [PMC free article] [PubMed] [Google Scholar]
12. Biga N, Thomine JM. Trans-olecranal dislocations of the elbow. Rev Chir Orthop Reparatrice Appar Mot. 1974;60:557–67. [PubMed] [Google Scholar]
13. Badelon O, Bensahel H, Mazda K, Vie P. Lateral humeral condylar fractures in children:A report of 47 cases. J Pediatr Orthop. 1988;8:31–4. doi: 10.1097/01241398-198801000-00008. [DOI] [PubMed] [Google Scholar]
14. Woods GW. American orthopaedic society for sports medicine. Am J Sports Med. 1977;5 [Google Scholar]
15. Tushar Ranjan Dalei , Subhamya Chinmaya Swain , Deepak Kumar Meher. J Orthop Case Rep. 2023 Aug;13(8):24–27. doi: 10.13107/jocr.2023.v13.i08.3800. PMCID: PMC10465736 PMID: 37654754.
16. Ghoti SD, Punekar AD, Das J, Rathod A, Jain H, Shetty RS. Medial Epicondyle Fractures Treated with Diverse Fixation Techniques: A Case Series. Journal of Orthopaedic Case Reports 2026 February;16(02): 364-370.