CASE REPORT

CASE OF PURE LATERAL DISLOCATION OF ELBOW IN A 55 YEAR ADULT

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ABSTRACT: INTRODUCTION: Elbow dislocations are frequently encountered during clinical practice, posterior dislocation being most common while pure lateral being less. Lateral type indicates high energy trauma and significant ligament injury.

CASE REPORT: We present here a case of a 55 year old male with a pure lateral dislocation who presented six hours after injury. Closed reduction, attempted under anesthesia, was unsuccessful and had to be open reduced. A tight band of brachialis muscle was noted as cause for failure of closed reduction.

DISCUSSION: Pure lateral dislocation being very rare (incidence - 0.7%) is associated with significant ligament injuries around the elbow.

CONCLUSION: Lateral dislocation of elbow requires careful investigation, early reduction and assessment for elbow instability.

INTRODUCTION: Posterior elbow dislocations are most common type of elbow dislocation seen in clinical practice (2). Other types of elbow dislocation such as anterior, medial, lateral and divergent are very rare. We are presenting a rare case of traumatic pure lateral dislocation of elbow in a 55 yr adult male.

CASE REPORT: A 55 years-old male, farmer, fell off a bullock-cart, with trauma to partially flexed left elbow. After the trauma, patient noticed severe pain and deformity of his left elbow, for which patient came to the hospital about 6 hours after the injury. On examination, there was swelling around the elbow and lower arm. The medial epicondyle and trochlear groove were prominent and easily palpable. There was widening of the elbow along with lateral displacement of olecranon and radial head. The elbow was in 20-30 degree flexion and the forearm was in supination. There was no neurovascular deficit distally.

On X-ray of the left elbow Antero posterior view (figure 1) the olecranon and radial head were lateral to the capitulum while on lateral view the radial head and coronoid process were anterior to capitulum. There was no evidence of any fracture.

After 9 hours of injury under general anesthesia closed reduction was tried by traction and varus force on elbow to reduce the prominent medial part of humerus, but it was not reducible. Hence, anteromedial incision over the bony prominence was taken. The distal end of humerus was in subcutaneous plane. The ulnar nerve was identified, medial collateral ligament was found to be detached from the humeral side and flexor pronator origin were found torn (figure 2). Through the torn medial capsule, the anterior tight band of brachialis muscle was lifted anteriorly and the elbow
was reduced. On clinical examination the lateral structures were found to be intact. The torn medial collateral ligament was sutured back by making a bone tunnel. Stability of the elbow was achieved throughout the range of motion. The remaining part of the capsule and the flexor pronator origin was resutured. The patient was kept in Above Elbow slab in 90 degree flexion position for 2 weeks. The post-operative X-ray was suggestive of a reduced elbow (figure 3). The patient did not have any post-operative distal neurovascular deficit. The patient was given Indomethacin to prevent heterotrophic ossification. The patient was started on active range of motion exercises with a hinged elbow brace till 6 weeks. The patient achieved full range of motion and returned to his normal occupational activities at the end of 3 months.

Figure 1: AP and lateral view of the lateral dislocation of the elbow.

Figure 2: Through anteromedial approach, the humerus exposed, the flexor pronator origin and the MCL are noted to be detached and the ulnar nerve can also be identified.
DISCUSSION: A pure lateral dislocation of the elbow is a very rare finding. Henry estimated only 0.7% incidence in his study (5). Three varieties of lateral dislocations of elbow have been described by Speed- complete dislocation with forearm in pronation, complete dislocation without pronation and incomplete dislocation (3). In our case, the mechanism of injury was trauma to the medial aspect of the elbow with forearm in supination which is very rare. In lateral dislocation of elbow due to severe capsulo-ligamentous injury, reduction can be easily done. However of the few cases reported of irreducible dislocations, Exarchou noted anconeus as the failure of closed reduction (4). Smith reported brachialis as the cause of failure in his case. A capitulars fracture was also noted by Smith. Chapparwal and Vaidya reported brachialis with chip fracture of coronoid to be preventing the reduction (1). The presence of intra-articular fragments avulsed from the medial epicondyle or the lateral condyle especially in children may prevent reduction. In our case, the brachialis prevented the reduction but no chip fracture of coronoid or fracture of capitulum was noted. There was no ulnar nerve entrapment or radial and ulnar nerve stretch injury in our case.

CONCLUSION: Thus here we conclude that a pure lateral dislocation of the elbow joint is very rare type of dislocation and signifies high energy trauma. It is associated with severe ligament injuries around the elbow with multiple factors responsible for difficult reduction which may require open reduction. Careful investigation, early reduction and assessment for elbow joint instability are thus recommended.

REFERENCES:

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