

**CASE REPORT****Bilateral Anterior Fracture Dislocation of Shoulder-A Rare case**

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**Abstract:**

We report an unusual case of simultaneous bilateral anterior glenohumeral fracture dislocation following fall from standing height. A 24 years old male presented with bilateral anterior glenohumeral dislocation with no peripheral motor, sensory or vascular deficit. Closed reduction was done for right glenohumeral dislocation and on left side open reduction and internal fixation was done. He was placed in bilateral slings and progressive and controlled mobilization was started. The patient was discharged and is currently under follow up.

**Keywords:** Glenohumeral joint, Bilateral anterior Fracture-Dislocation.

**Introduction:**

The glenohumeral joint dislocation is the most common type of joint dislocation [1]. Unilateral anterior dislocation of shoulder has a higher incidence than posterior dislocation. However, bilateral glenohumeral shoulder dislocations are rare and almost always posterior [3]. Bilateral fracture-dislocation is even rarer, with only few case reports available [4]. In this study we report an unusual case of simultaneous bilateral anterior fracture dislocation of shoulder following trauma [2].

**Case report:**

A 24 years old male presented in emergency with pain, swelling and deformity of bilateral shoulder joints, the patient gave an alleged history of fall from standing height on his back landing on a outstretched hands after an episode of vertigo. There was no history of concomitant pathological status, seizure disorder. The physical findings revealed obvious bilateral anterior glenohumeral dislocation with no peripheral motor or vascular deficit. Left shoulder had additional findings of crepitus, sensory loss over lateral aspect of upper

arm and abnormal mobility whereas right shoulder was fixed in abduction and external rotation. Radiological examination showed right anterior glenohumeral dislocation with fracture of greater tuberosity (Fig. 1) and left anterior glenohumeral dislocation with fracture of anatomical neck (Fig. 2).



**Fig. 1 – Showing Right Anterior Glenohumeral Dislocation with Associated Greater Tuberosity Fracture**



**Fig. 2 – Showing Left Anterior Glenohumeral Dislocation with Anatomical Neck Fracture**



**Fig. 3 – Showing CT Scan Showing Left Anterior Glenohumeral Dislocation with Anatomical Neck Fracture**



**Fig. 5 – Showing Left Anterior Glenohumeral Dislocation with Anatomical Neck Fracture Fixed with Locking Plate and A K-Wire**



**Fig. 4 – Showing Right Anterior Glenohumeral Dislocation with Associated Greater Tuberosity Fracture Fixed with Two Cannulated Cancellous Screws**



**Fig. 6 – Showing Post Operative Clinical Photograph**

CT scan was done for confirmation of extent and pattern of fracture of left glenohumeral joint (Fig. 3). Patient was taken for emergency surgery under general anesthesia. Closed manipulation was successful and right glenohumeral dislocation was easily reduced, by Kocher's maneuver, and then greater tuberosity fracture was percutaneously fixed with two cannulated cancellous screws. On left side open reduction was done using standard deltopectoral approach and fractured anatomical neck was fixed using locking plate. A k-wire was passed from acromian process to the humerus to stabilize glenohumeral joint. Capsule and soft tissue was meticulously repaired. Post-reduction examination and radiographs were satisfactory (Fig. 4, 5). He was placed in bilateral slings for 4 weeks (Fig. 6).

Progressive and controlled mobilization was started. The patient was discharged and is currently under follow up.

#### Discussion:

Glenohumeral dislocations are commonly seen in young men after a trauma. This is followed by dislocations seen among elderly women because of increased risk of fall and decrease of cross-linked collagen tissue at the joint capsule [5]. After the trauma, coracoacromial arch and rotator cuff levers the humeral head with forced extension and abduction of the arm from the glenoid fossa in an inferior manner and flexor and external rotators levers the head to anterior manner [6]. Of the unilateral glenohumeral dislocations 96% were reported to be anterior, 3% posterior and 1% inferior [7].

Bilateral shoulder dislocation was first described in 1902 in a patient with muscular contraction caused by a camphor overdose [8]. Bilateral posterior glenohumeral dislocation was thought to be a rare finding and prior to 1969 only 20 cases had been reported [9]. Since then, however, many more cases have been reported. The abundance of recent papers would suggest that bilateral posterior disloca-

tion is a recognized sequel following maximal involuntary muscle contraction such as occurs during epileptic seizures and electrocution. During a generalized seizure, the relatively weak external rotators of the humerus are overcome by the more powerful internal rotators, with the resultant adduction and internal rotation sufficient to cause posterior glenohumeral dislocation [10].

Bilateral anterior dislocation, however, is still regarded as very rare. Dinopoulos *et al.* in 1999 found that only 28 cases had been reported since 1966 [2]. A review of the literature revealed that about 15 of which were of fracture-dislocation [11]. Unlike the posterior dislocations, the anterior dislocations occurred more commonly following trauma rather than seizures [12]. Acute dislocations of the glenohumeral joint should be reduced as quickly and gently as possible [13]. Therefore the patient was posted immediately in emergency hour and under general anesthesia.

Various principles have been used in the close reduction of shoulder dislocation, as Stimson's, Milch's or Kocher's technique [14]. We preferred Kocher's technique for the close reduction of right glenohumeral joint. Right glenohumeral joint was easily reduced by closed manoeuvre as continuity of humeral shaft and humeral head was maintained, moreover it also reduced fracture greater tuberosity which was then fixed percutaneously with two cannulated cancellous screws. On Left side for fracture dislocation of glenohumeral joint an attempt of closed reduction was made which failed as expected and therefore it was treated with open reduction using deltopectoral approach and was fixed with locking plate and a k wire.

The principles of management are the same as those for unilateral dislocation with analgesia and adequate imaging in the first instance. Early reduction and immobilization should be followed by progressive active and passive physiotherapy. This poses obvious problems in the case of bilateral injuries when the patient may require remaining in hospital for an extended period [12].

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