Annals of Clinical Case Reports

Case Report
Published: 27 Sep, 2021

Missed Bilateral Anterior Fracture Dislocation of the Shoulder with Symmetrical Greater Tuberosity Fractures after Epileptic Convulsive Seizures

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Abstract

Background: Unilateral shoulder joint dislocation is a common orthopedic presentation in the emergency rooms. While bilateral glenohumeral joint dislocations are uncommon, bilateral fracture dislocations are even rare. The majority of the posterior dislocations were reported during epileptic fits, electric shock, electroconvulsive therapy, patients with neuromuscular disorders and psychiatric disturbances. Although bilateral anterior fracture dislocations of the shoulder mostly caused by violent trauma few rare cases were attributed to epileptic convulsions and hypoglycemic seizures.

Case Report: We represented a rare case of 48 h missed bilateral anterior fracture dislocation of both shoulders after an epileptic fit with symmetrical fracture of both greater tuberosities, the patient was treated with closed reduction and percutaneous fixation of the fractures with short threaded cannulated screws and washers under image intensifier. At the end of one-year follow up the patient achieved painless and satisfactory range of motion of both shoulders.

Conclusion: Orthopedic surgeons should be aware of patients with shoulder pain after convulsive seizures. Preoperative planning and proper management should be achieved promptly to avoid serious complications.

Keywords: Bilateral shoulder dislocation; Anterior; Fracture; Epilepsy

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Received Date: *09 Sep 2021*
Accepted Date: *22 Sep 2021*
Published Date: *27 Sep 2021*

Citation:
Hamido F, Habib AA, Nagi A, Habiba AA. Missed Bilateral Anterior Fracture Dislocation of the Shoulder with Symmetrical Greater Tuberosity Fractures after Epileptic Convulsive Seizures. Ann Clin Case Rep. 2021; 6: 2010.

ISSN: 2474-1655

Background

Unilateral shoulder dislocation is a common injury but, bilateral shoulder fracture dislocations are uncommon event. A majority of the posterior dislocations were reported during epileptic fits (seizure), electroconvulsive therapy, patients with neuromuscular and psychiatric disorders. Bilateral anterior fracture dislocations of the shoulder mostly caused by violent trauma, few cases were attributed to epileptic and hypoglycemic seizures.

Case Presentation

A 23 years old male patient has been presented to our hospital emergency room suffering from bilateral deformed painful shoulder after an attack of epileptic convulsive seizures forty eight hours earlier. Clinical examination findings included bilateral flattening of both shoulders with restricted painful movements in abduction and external rotation. The radial pulse felt well bilaterally, there were no signs of neurological deficit. Radiological examination revealed bilateral anterior fracture dislocation of the shoulders with symmetrical bilateral greater tuberosity fractures (Figure l). After preoperative workup, Neurophysician and Anesthetic consultation as well as informed consent, the patient was taken to the theater where he was treated by closed reduction of the shoulders under general anesthesia. The bilateral greater tuberosities fractures were still displaced so; reduction and fixation were performed under image intensifier using percutaneous short threaded titanium cannulated screws and washers. The post operative check X-rays showed satisfactory reduction and fixation (Figure 2). The patient was kept in bilateral broad arm slings in adduction and internal rotation for five weeks, progressive mobilization started at the third week with pendulum exercises followed by electric stimulation after each session, gentle capsule stretching exercises were used for restoration of flexibility. The patient was able to resume work three months after surgery. After a period of one- year follow-up, the patient achieves an excellent recovery with bilateral comfortable

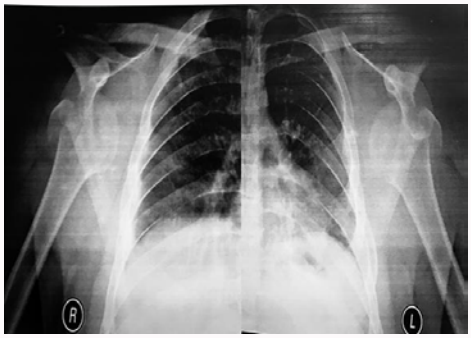

Figure 1: Radiological examination revealed bilateral anterior fracture dislocation of the shoulders with symmetrical bilateral greater tuberosity fractures.

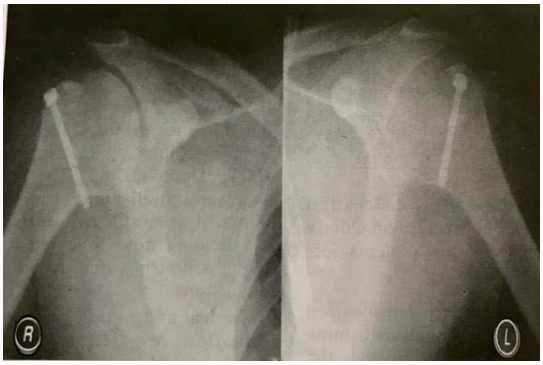

Figure 2: The post operative check X- rays showed satisfactory reduction and fixation.

range of motion in both shoulders (0 to 160) degrees abduction, internal rotation to 70 degrees to (T6) bilaterally and 60 degrees of external rotation on both sides. Clinically the patient had no signs of instability.

Discussion

The gleno-humeral joint is the most dislocatable joint in the body about 85% of all dislocations. 95% of shoulder dislocations are anterior, 10% to 15% of those are associated with greater tuberosity [1-3]. In epileptic patients, although majority of bilateral shoulder dislocations are posterior, bilateral anterior dislocations are rare entity as the forces required to produce the dislocation must act synchronously and in a similar manner at both joints. Sudden violent muscular contractions and deceleration forces in extension abduction and external rotation have been reported as the main cause of bilateral anterior dislocation or fracture dislocation of the shoulder [2-6]. The internal rotators of the arm overcome the external rotators forces the humerus in adduction and internal rotation during epileptic convulsions when violent muscle contraction dislocates the humeral heads posteriorly [2,3]. The literature had been previously reported few cases of post traumatic bilateral anterior dislocations of the shoulders [3-10]. As the greater tuberosity was displaced in approximately 10% to 15% of all anterior dislocations, anatomical reduction and internal fixation should be achieved properly because failed management can lead to impingement syndrome, rotator cuff damage and permanent shoulder disability [1,3]. Bachhal Vetal [4] have been reported one case with post traumatic bilateral anterior dislocations associated with bilateral four-part fractures of the proximal humerus in 60 years old male patient due to electrocution. Considering the patient age and the fractures pattern, bilateral hemiarthroplasty was done. At the final follow-up after two years, the patient was pain free with comfortable range of motion of both shoulders. A review of the literature revealed about 30 reports of bilateral anterior dislocations of the shoulders, 15 of which were fracture dislocations, most of them were due to violent trauma or electrocution, and the remaining few were attributed to epileptic or hypoglycemic seizures [9-12]. In this report we have been represented a rare case of young patient with two days missed bilateral anterior fracture dislocations of the shoulders with a mirror image bilateral greater tuberosity fracture during an epileptic convulsive seizure. The patient was treated by closed reduction of both shoulders anatomically and the bilateral greater tuberosity fractures were reduced and fixed by percutaneous short threaded cannulated screws under image intensifier.

Learning Points

- Despite of the rarity of the reported bilateral fracture dislocation shoulder cases, orthopedic surgeons should be aware of shoulder joint injuries in patients with shoulder pain after convulsive seizures.
- Preoperative planning and proper management should be achieved promptly to avoid serious complications.

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