

Anterior Shoulder Fracture Dislocation in A Patient With Stiffmans Syndrome and Convulsive Disorder: Rare Case Report

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ABSTRACT

Anterior shoulder fracture dislocation is a challenging case though commonly seen in conjunction with convulsive disorders. No case of stiff-Person Syndrome (SPS) presenting with anterior fracture dislocation is reported in the literature. SPS is estimated to have a prevalence of about one per million with the first known description being attributed to Moersch and Woltman in 1956. The diagnosis and injury patterns of anterior fracture dislocation are more clearly seen on Computed Tomography (CT) Scans which also aids in planning for the surgical management. The treatment outcome after surgical reduction and internal fixation of the fracture with dislocation is associated with excellent functional results.

Key words: Anterior; Fracture dislocation; Stifman syndrome

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INTRODUCTION

Anterior dislocation of the shoulder in a patient with stiffmans syndrome is not reported anywhere in the literature. This kind of injury usually occurs as a result of a major trauma^[1]. These injuries often occur as a result of high energy trauma and accidents. The literature review showed few cases with no adequate follow up results. with not adequate follow up results. Isolated fractures of the greater tuberosity constitute 17% to 21% of proximal humeral fractures, and approximately 15% to 30% of them are associated with a traumatic anterior dislocation of the shoulder^[2,3]. Nonoperative treatment for nondisplaced fractures after reducing the dislocation is suggested , but there is no consensus on the degree of displacement that warrants surgery^[3].

Here we report a case of 33 year old man with anterior dislocation due to trivial trauma.

CASE REPORT: ANTERIOR FRACTURE DISLOCATION

A 33 year old was brought into the emergency department after having had a seizure while asleep. According to the sister he fell off bed while asleep. The past medical history revealed Stiffmans Syndrome on follow up by a neurophysician for 3 years. The patient was orientated normally on arrival but he could not remember clearly the incident. He denied any history of alcohol consumption or prior seizure disorder. Cardiovascular examination was normal. On physical examination an impression of anterior dislocation of the humerus head was made. This was confirmed by plain radiographs and CT scan of the shoulder (Figures 1, 2 and 3).

On X-ray the head of the humerus was not only dislocated anteriorly, but also fractured into 2 parts (Figures 4 and 5). A cerebral CT

scan was normal. An Electroencephalogram showed a normal pattern with much slow activity in the left temporal region, with some isolated sharp waves, but no clear epileptic activity. The patient was managed by open reduction and internal fixation using two 3.5 mm half threaded screws after reduction of the fracture. Post operatively the patient was started on physiotherapy after two weeks and regained full range of motion by the third month post surgery.

DISCUSSION

The anterior dislocation of the shoulder and fracture of humerus are commonly encountered problems but simultaneous occurrence of them is extremely rare. Most of the reports in the literature are restricted to case reports only by various authors^[4,5,6,7]. Flint reported dislocation of the shoulder with three parts proximal humerus fracture and shaft of humerus fracture^[8,9].

Most injuries reported in the literature are caused by high velocity

accidents due to motorcycle and car accidents. The other reported mechanism of injury is falls from heights. It is postulated that these injuries occur due to a flexed elbow with slight abduction of the shoulder. The mechanism of a greater tuberosity fracture is usually described as an avulsion fracture of the rotator cuff that occurs as a shearing against the glenoid rim in extreme rotation, which then hits the greater tuberosity as it moves towards the acromion^[10,11,12]. Whether the dislocation and fracture occur simultaneously or subsequently is controversial a subject of biomechanical studies. Some studies have proposed that with injuries involving high velocity trauma, the axial loading force leads to the transfer of energy to the shaft of the humerus and into the shoulder, resulting in the simultaneous injuries^[9,10].

Conservative management for the cases of dislocation with fracture is reported with good outcomes. However in case of failed closed reduction open reduction and internal fixation is recommended to avoid further iatrogenic injuries. Post-operatively the patient recovered uneventfully. Anatomic reconstruction of the greater tuberosity and subsequent rotator cuff repair allow for early passive motion of the joint; the subsequent avoidance of tendon retraction, malunion, and secondary displacement yields a predictable and satisfactory clinical outcome.

CONCLUSION

Anterior fracture dislocation of the humerus is rare and a challenging task. It was not possible to treat this patient by closed reduction because the dislocation was locked. Three months after operation the result was satisfactory and long term follow up is needed to rule out possible complications.

Ethical standards

The patient gave the informed consent to the publication of the case



Figure 1 AP X ray showing anterior fracture dislocation.



Figure 2 CT Scan showing anterior fracture dislocation.

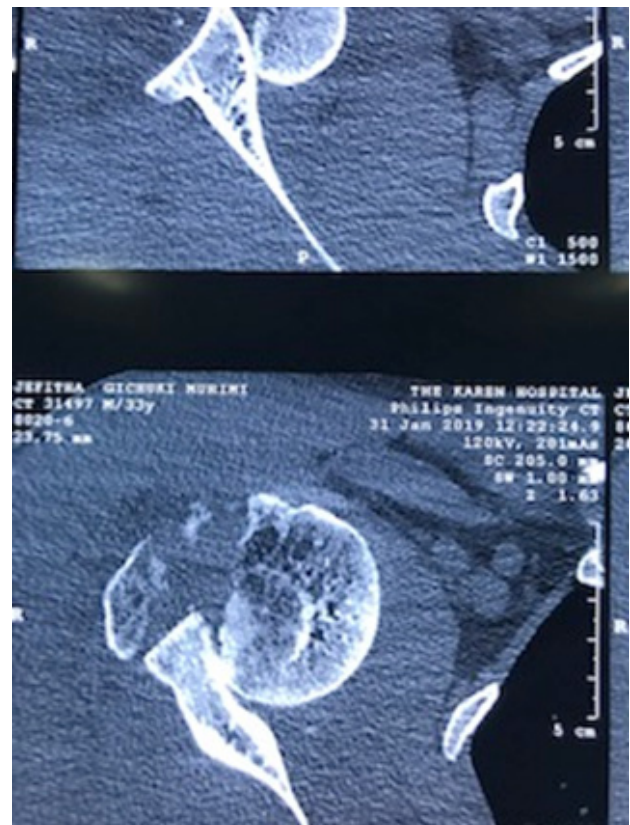


Figure 3 Pre operative CT Scan showing fracture dislocation.



Figure 4 Immediate post operative X rays showing fixed fracture fragment and reduced dislocation.

study. There is no conflict of interest.

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Figure 5 Post operative X-ray at 3 months.