

CASE REPORT

SEIZURE PRESENTING WITH FRACTURE AT ONSET –A CASE REPORT

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INTRODUCTION: Injuries are very common after a convulsive episode of seizure . The patient can sustain soft tissues injuries in the form of tongue bite, and cuts or abrasions over skin. But more problematic are bony injuries like dislocation and fracture¹. These injuries can be primarily due to epileptic fit or secondary to the accidental fall , which the patient sustain after the seizure ¹. We describe a young male who had bilateral posterior dislocation of shoulder in the first episode of seizure.

KEY WORDS: Seizure, Dislocation, Fracture

CASE REPORT: A 32 year male had two episodes of serial generalised tonic clonic convulsions in succession. There was no history of fever / chronic headache /visual disturbances/trauma. On examination he was conscious and oriented well in time and person . BP 132/80 mmHg right upper limb in supine position, pulse rate 88/minute and regular. Both eyes fundus were normal. Both the shoulder joints were tender and range of movements was also restricted. Rest of the neurovascular examination was unremarkable except that range of movements were restricted in both shoulder joints. Fullness, cellulites and tenderness was present over right shoulder. Investigations revealed routine blood and biochemistry to be normal. CT Brain - normal. EEG showed generalised spike and wave discharges. X-ray both shoulder joints A/P view revealed posterior dislocation. Left humerus had simple fracture anatomical neck (Fig 1a) but right humerus also had comminuted fracture anatomical neck (Fig1b). Patient underwent needful surgical intervention. He was put on two anticonvulsants considering the severity of the injury, he sustained in the first seizure itself.

DISCUSSION: Epilepsy is a common problem in the general population. About three percent of seizure patients are injured directly due to the convulsive event or indirectly due to sudden fall following the seizure². Multiple bony fractures and dislocations have been described following seizures .Posterior dislocation of the shoulder joint is the most common type of dislocation associated with seizure, though anterior dislocation has been occasionally described³.The fracture dislocation of the humerus is typically associated with epilepsy, electrocution or extreme trauma. The shoulder joint is commonly predisposed for injury during a convulsive seizure because of the shallow glenoid cavity and the typical position of adduction, internal rotation and flexion of it during the convulsion. With the intense spasm of the muscles the humeral head is forced superiorly and posteriorly over the glenoid cavity .Thus the humeral head stays locked behind the glenoid . Then with further convulsive force, the humeral head

CASE REPORT

impinged against the glenoid rim, resulting eventually in a complex proximal humeral fracture. Next common are the bony fractures of neck of femur in seizure. They are usually bilateral and in rare cases acetabular fracture also can be seen with seizure⁴. The tremendous forceful contractions of pelvotrochanteric muscles acting in a craniomedial direction in a seizure can lead to fracture dislocation of the hip joint. Compression fracture of the vertebrae is the next in order in epileptics. The incidence of symptomatic spinal fracture from a seizure is rare, whereas asymptomatic spinal fracture may be as high as fifteen percent⁵. The most common fracture location in the vertebral column is the upper to mid-thoracic region. Here also forceful contractions of the axial musculature in a generalized tonic clonic seizure produce hyperflexion of spine leading to fractures, especially of the thoracic vertebra⁶. To diagnose compression fractures of the spine, index of suspicion should be high in the patient presenting with complaints of ill-localized back pain without any history of trauma or fall. Other potential sites of fracture-dislocations in seizure are facial bones, proximal humerus, distal radius and the ankle bones⁷.

This case demonstrates that bilateral posterior shoulder dislocations are implicated with unwitnessed seizures. Therefore, a high index of suspicion of a seizure disorder must exist in situations where patient wakes up with bony fracture or dislocation with no history of trauma.

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CASE REPORT



Fig 1a. Fracture anatomical neck of the left humerus and posterior dislocation of the shoulder .



Fig 1b. Comminuted fracture anatomical neck of the right humerus and the posterior dislocation of the shoulder.