



Case Report

Bilateral symmetric anterior shoulder dislocation following seizure: A case report

Rajarshi Chakraborty^{1*}, Sarvesh Kr Chaudhary², Harish Nigam¹

¹Dept. of Neurology, King George's Medical University, Lucknow, Uttar Pradesh, India

²Hind Institute of Medical Sciences, Barabanki, Uttar Pradesh, India

Abstract

Seizure and epilepsy are important neurological disorders with guarded prognosis. Orthopaedic complications following seizure can have various phenotypes including shoulder dislocation, fractures, etc. The occurrence of bilateral symmetric anterior shoulder dislocation after seizure is rare. In this case report, we discuss a 35-year-old-female presenting with bilateral anterior dislocation of shoulders after seizure episode and its outcome.

Keywords: Seizure, Bilateral, Anterior dislocation, Shoulder, Outcome.

Received: 12-06-2025; **Accepted:** 18-07-2025; **Available Online:** 20-08-2025

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprint@ipinnovative.com

1. Introduction

Shoulder dislocation is an orthopaedic emergency, with good outcome usually on reduction procedures. It occurs posteriorly in majority, primarily trauma-induced. Bilateral symmetric anterior shoulder dislocation (BSASD) is typically the result of trauma, but can occur due to extreme muscular spasm. Seizure and epilepsy are important, but less commonly recognized causes of non-traumatic BSASD.¹ In addition, orthopaedic complications after a seizure include bony fractures, joint subluxations, muscular injury, bone sepsis, fat embolism.^{2,3}

The occurrence of bilateral anterior shoulder dislocation after seizure is rare. In this case report, we discuss a 35-year-old-female presenting with bilateral anterior dislocation of shoulders after seizure episode and its outcome.

2. Case Presentation

A 35-year-old female experienced a sudden onset of generalized tonic-clonic seizure activity around 2 a.m. Her

relatives were awakened by her body movements. The seizure episode lasted approximately five minutes, after which the patient was confused for about an hour before becoming fully oriented. The following morning, she presented with headache, vomiting, and weakness in both upper limbs. There was no past history of similar illness, trauma, diabetes or hypertension. Her general examination and nervous system examination were unremarkable except for restriction of movement across both the shoulder joints, along with loss of deltoid prominence. The blood investigations including hemogram, glucose, renal function, liver profile tests were normal. Given the seizure and headache, the brain magnetic resonance imaging was performed, revealing solitary granular stage of neurocysticercosis with perilesional edema of the left frontal lobe (NCC). The patient was administered intravenous levetiracetam and dexamethasone. While she experienced no recurrence of seizures, she was unable to grip objects and reported pain on moving her upper limbs.

*Corresponding author: Rajarshi Chakraborty
Email: satyalung@gmail.com



Figure 1: Anteroposterior view of x-ray of shoulder joint showing bilateral anterior shoulder joint dislocation.

X-rays were conducted, showing bilateral anterior shoulder dislocations (**Figure 1**). Orthopedic consultation was taken where closed reduction was done, followed by immobilization for 6 weeks. Patient was clinically stable at 2 months of follow-up.

3. Discussion

This case describes the occurrence of bilateral shoulder dislocation after seizure episode and its outcome. Bilateral anterior shoulder dislocation is an uncommon finding in seizure episodes. Posterior dislocations are commonly observed in seizure, esp. after electroconvulsive therapy, while anterior are more common in trauma.^{4,5} Dislocations after seizure episode can occur due to sudden rapid excessive jerky stress-strain of the limb during the active phase of seizure. It can present with sudden restriction of movement of the limb, mimicking monoplegia. This can be further critical in suspecting frontal lobe lesion with seizure and limb weakness, suspecting a space-occupying lesion falsely. Early recognition of this disorder and a prompt shoulder joint dislocation reduction can lead to better prognosis, as in our case. This case underscores the importance of considering bilateral anterior shoulder dislocations in patients presenting with new-onset seizures and associated upper limb weakness without trauma.⁶ Recently, similar finding occurred in chikungunya encephalitis, wherein

seizure-related anterior dislocation of shoulder was reported, in addition to the largest review of literature including 11 cases of BSASD.⁷ The patho-mechanism of this entity is not fully known, however there are hypothesis of shoulder contact-point at trauma, position of limb at seizure, forceful excursion of limb movement during seizure.^{8,9}

4. Conclusion

Bilateral anterior dislocation of shoulders is gaining an improved detection rates. However, a high index of suspicion and early management can provide better outcome.

5. Source of Funding

None

6. Conflict of Interest

None

References

1. Stafstrom CE, Carmant L. Seizures and epilepsy: an overview for neuroscientists. *Cold Spring Harb Perspect Med.* 2015;5(6):a022426.
2. Finelli PF, Cardi JK. Seizure as a cause of fracture. *Neurology.* 1989;39(6):858–60.

3. Pushpakumara J, Sivathiran S, Roshan L, Gunatilake S. Bilateral posterior fracture-dislocation of the shoulders following epileptic seizures: a case report and review of the literature. *BMC Res Notes*. 2015;8:704.
4. Dinopoulos HT, Giannoudis PV, Smith RM, Matthews SJ. Bilateral anterior shoulder fracture-dislocation. a case report and a review of the literature. *Int Orthop*. 1999;23(2):128–30.
5. Betz ME, Traub SJ. Bilateral posterior shoulder dislocations following seizure. *Intern Emerg Med*. 2007;2(1):63–5.
6. Suryavanshi A, Mittal A, Dongre S, Kashyap N. Bilateral anterior shoulder dislocation with symmetrical greater tuberosity fracture following seizure. *J Orthop Case Rep*. 2012;2(1):28–31.
7. Budhoo E, Mohammed SR, Baiju D, Corbin RE, Deane DR, Kassie P. Chronic bilateral symmetric anterior shoulder dislocation secondary to seizures in chikungunya encephalitis. *Cureus*. 2022;14(12):e32792.
8. O'connor-Read L, Bloch B, Brownlow H. A missed orthopaedic injury following a seizure: a case report. *J Med Case Rep*. 2007;1:20
9. George MS. Fractures of the greater tuberosity of the humerus. *J Am Acad Orthop Surg*. 2007;15(10):607–13.

Cite this article: Chakraborty R, Chaudhary SK, Nigam H. Bilateral symmetric anterior shoulder dislocation following seizure: a case report. *IP Indian J Anat Surg Head, Neck Brain*. 2025;11(2):50–52.