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Bilateral Anterior Dislocation of the Shoulder after an Epileptic Seizure during the Sleep: A Case Report and Review of Literature

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Abstract

Bilateral dislocation of the shoulder is rare and still very rare when it arises during the sleep due to an epileptic seizure. We report in this work the case of a young 24-year-old patient not known epileptic before and who never has a convulsive crisis. We discuss the mechanism of this uncommon variety of shoulder dislocation and modalities of treatment.

Keywords

Bilateral, Shoulder, Dislocation, Instability, Epilepsy

Subject Areas: **Orthopedics**

1. Introduction

Bilateral dislocations of shoulder are rare although they arise on the joint the most subject to dislocations and are most of the time post-traumatic or secondary to convulsive seizures. Posterior variety is the most common and few cases of anterior dislocation are reported in literature.

In the present report, we present a case of bilateral anterior dislocation of shoulder at a young 24-year-old pa-

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tient not known epileptic before arising during the sleep and revealing the instability of right shoulder which is twice dislocated later.

The epilepsy is characterized by discharges of abnormal nerve impulses in the brain. These discharges arise in a sudden way. Usually, they are short-lived. These abnormal nerve impulses can be measured by an electroencephalogram (EEG). In approximately 60% of the cases, the exact cause of the crises is not determined. We suppose that approximately 10% a 15% of all the cases would have a hereditary component. The crises are partial or generalized and could engender grave traumas if the person loses control of its movements.

We discuss the managing treatment in emergency and the therapeutic approach for the care of the right shoulder instability.

2. Case Report

A young 24-year-old patient without particular history or trauma was admitted in emergency in the middle of the night for pain of both shoulders with functional disability that occurred during the sleep. He does not understand what happened exactly. He is not known epileptic and has never undergone a convulsive seizure.

The clinical examination objectified a deformation of both shoulders with projection of the acromion and a blocking of both shoulders in abduction and external rotation (**Figure 1**). There were no vascular or nervous deficits.

Radiological examination in emergency radiology department confirmed bilateral anterior shoulder dislocation. No fractures were objectified on the X-rays (**Figure 2**).

Both dislocations were reduced using the Kocher's technique under general anesthesia. In this technique we try to place the upper limb in adduction, elbow stuck on the thoracic wall, and we exercise an external rotation then a flexion of the shoulder.

The control by X-ray and CT scan confirmed the reduction and objectified a bilateral hill-sachs lesion (**Figure 3**). The patient was hospitalized afterward in the department of orthopedics and benefited from a neurological

Figure 1. Clinical presentation of bilateral shoulder dislocation.

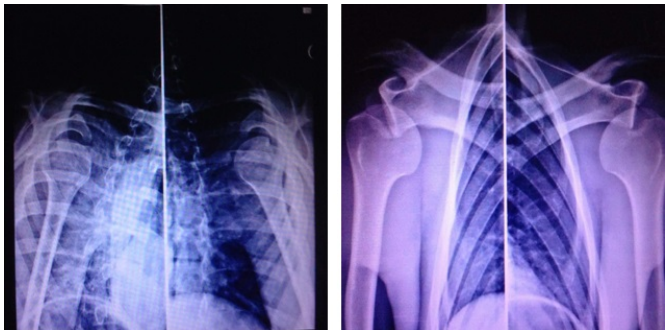

Figure 2. Anterior dislocation of both shoulder joints.

Figure 3. CT scan control after reduction showing hill-sachs lesion.

evaluation which revealed an epileptic disease previously unknown. The immobilization was realized by arm slings and recommended for two weeks but the patient did not meet this deadline and resumed his work even before benefiting from a physiotherapy.

We have received 2 months later the same patient in emergency unit twice for a dislocation of right shoulder two months apart which were both reduced. He's now under treatment and programmed for a right Latarjet procedure.

3. Discussion

Bilateral dislocations of shoulders are a rare clinical entity [1] [2]. Fewer than 50 cases of bilateral anterior shoulder dislocation have been described in the literature due to violent muscle contractions (epileptic seizures) [3]-[5]. They were first described in 1902 by Mynter in patients poisoned by camphor overdose [6] [7]. The posterior variety is the most common in bilateral dislocations and caused essentially by epileptic seizures or electrical shock [2] [8]-[10] or housework accidents [11]. Asymmetric dislocations have also been reported in the literature [12] [13]. Singh and Kumar reported a case where both shoulders would have dislocated by different mechanisms: traumatic and atraumatic [14]. Bilateral dislocation requires synchronous and simultaneous forces at both joints which could be generated by several mechanisms [1]. Usually both shoulders appear symmetrical and diagnosis may be missed if practitioner is not familiar to similar cases. Neglected forms of bilateral dislocations of shoulder have been reported in the literature and require a surgical reduction with eventual internal fixation [6] [9] [15].

Few cases of bilateral dislocation of the shoulder during the sleep were reported in the literature [16]. We report a case of post-seizure anterior bilateral dislocation of shoulder during the sleep. At first the mechanism was not elucidated because the patient was not known epileptic and never had a convulsive seizure before. The neurological evaluation (sleep EEG) confirmed the diagnosis which was the starting point of a right shoulder instability because the patient was victim of two episodes of right shoulder dislocation later. He is actually followed by a neurologist. We think that he had several asymptomatic seizures during the sleep in the past and that he needs a surgical stabilization of his right shoulder.

4. Conclusion

Bilateral dislocation of the shoulder is a rare entity caused by several mechanisms. Causes are dominated by traumas and seizures. The diagnosis must be confirmed by X-rays. The principles of treatment are the same as for unilateral dislocations. Misdiagnosed cases can lead to severe damages with a heavy impact on patient life quality.

Declaration of Interest

The authors declare that there are no conflicts of interest.

References

[1] Cresswell, T.R. and Smith, R.B. (1998) Bilateral Anterior Shoulder Dislocations in Bench Pressing: An Unusual Cause. *British Journal of Sports Medicine*, **32**, 71-72. http://dx.doi.org/10.1136/bjsm.32.1.71

[2] Ozer, H., Baltaci, G., Selek, H. and Turanli, S. (2005) Opposite-Direction Bilateral Fracture Dislocation of the Shoulders after an Electric Shock. *Archives of Orthopaedic and Trauma Surgery*, **125**, 499-502. http://dx.doi.org/10.1007/s00402-005-0830-6

[3] Ali, N., Bhat, A. and Bangroo, F.A. (2015) Simple Bilateral Anterior Shoulder Dislocation: A Case Report and Review of the Literature. *SA Orthopaedic Journal*, **14**, 47-51.

[4] Silva, L.P., Sousa, C.V. and Rodrigues, E. (2011) Bilateral Anterior Glenohumeral Dislocation: Clinical Case. *Revista Brasileira de Ortopedia*, **46**, 318-320. http://dx.doi.org/10.1590/S0102-36162011000300016

[5] Botha, A.H. (2010) Bilateral anterior Shoulder Dislocation: A Case Report of This Rare Entity. *SA Orthopaedic Journal*, **9**, 68-70.

[6] Choulapalle, R., Chokkarapu, R. and KanthKolluri, R. (2015) A Case of Neglected Bilateral Anterior Shoulder Dislocation: A Rare Entity with Unusual Mechanism of Injury. *Hindawi Publishing Corporation Case Reports in Orthopedics*, **2015**, Article ID: 461910.

[7] Mynter, H. (1902) Subacromial Dislocation from Muscular Spasm. *Annals of Surgery*, **36**, 117-119. http://dx.doi.org/10.1097/00000658-190207000-00014

[8] Zümrüt, M. and Marçıl, E. (2013) Bilateral Shoulder Injury Caused by Electric Shock. *Journal of Academic Emergency Medicine Case Reports*, **4**, 92-94. http://dx.doi.org/10.5505/jaemcr.2013.50570

[9] Lasanianos, N. and Mouzopoulos, G. (2008) An Undiagnosed Bilateral Anterior Shoulder Dislocation after a Seizure: A Case Report. *Cases Journal*, **1**, 342. http://dx.doi.org/10.1186/1757-1626-1-342

[10] Mnif, H., Koubaa, M. and Zrig, M. (2010) Bilateral Posterior Fracture Dislocation of the Shoulder. *Chirurgie de la Main*, **29**, 132-134. http://dx.doi.org/10.1016/j.main.2009.11.001

[11] Kalkan, T., Demirkale, I. and Ocguder, A. (2009) Bilateral Anterior Shoulder Dislocation in Two Cases Due to Housework Accidents. *Acta Orthopaedica et Traumatologica Turcica*, **43**, 260-263. http://dx.doi.org/10.3944/aott.2009.260

[12] Nema, S., Pai, D., Sinha, N. and Gupta, K. (2013) A Unique Case of Non-Traumatic Asymmetric Shoulder Dislocation with Four-Part Fractures of Proximal Humeri Following Seizures. *Journal of Emergencies, Trauma and Shock*, **6**, 231-232. http://dx.doi.org/10.4103/0974-2700.115358

[13] Ballesteros, R., Benavente, P. and Bonsfills, N. (2013) Bilateral Anterior Dislocation of the Shoulder: Review of Seventy Cases and Proposal of a New Etiological-mechanical Classification. *The Journal of Emergency Medicine*, **44**, 269-279. http://dx.doi.org/10.1016/j.jemermed.2012.07.047

[14] Singh, S. and Kumar, S. (2005) Bilateral Anterior Shoulder Dislocation a Case Report. *European Journal of Emergency Medicine*, **12**, 33-35.

[15] Rouhani, A., Zonooz, K.A. and Aghdam, H.A. (2010) An Unusual Cause of Bilateral Anterior Shoulder Dislocation. *Pakistan Journal of Medical Sciences*, **26**, 976-977.

[16] Newton, A.H. (1936) Shoulder Dislocation during Sleep. *British Medical Journal*, **2**, 1117. http://dx.doi.org/10.1136/bmj.2.3960.1117-b