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Non-Traumatic Bilateral Anterior Shoulder Dislocation

CASE REPORT

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ABSTRACT

Non-traumatic bilateral anterior shoulder dislocation is rarely encountered. A 26-year-old man who developed for the first time a bilateral anterior shoulder dislocation without a history of trauma, although he had a history of bilaterally dislocated shoulders at different times, was presented to our clinic. After confirmation by direct radiography and computerized tomography (CT), the patient underwent closed reduction of the glenohumeral joint and was managed with a conservative approach. We aimed to present this case with non-traumatic bilateral anterior shoulder dislocation, which is rarely seen, with nine cases reported in the literature.

Keywords: Shoulder dislocation, bilateral dislocation, non-traumatic shoulder

INTRODUCTION

Although the shoulder is the most frequently dislocated joint in the body, it is a rarely seen orthopedic pathology (1). The cases reported to be bilateral are more often dislocated posteriorly; bilateral anterior shoulder dislocation is rarely seen (2). The first case with non-traumatic bilateral anterior shoulder dislocation was reported by Sargent in 1909 (3). While the most common cause among bilateral cases is trauma (50%), muscle contractions secondary to seizures (epileptic, hypoglycemia, toxic, and hypoxic) are another main reason (37%). Of all cases, 15.7% are chronic patients (›3 weeks). In literature, only 9 cases with non-traumatic bilateral anterior shoulder dislocation have been reported.

CASE REPORT

A 26-year-old male presented to the emergency department with complaints of not being able to move his both shoulders at the early hours of the morning. In the anamnesis, he stated that he had fallen asleep on his shoulders on the table at night and had not been able to move his shoulders on waking up. His right shoulder had dislocated due to falling from a height 4 years previously and his left shoulder had dislocated because he had fallen during a football match 1 year after that. After that, he had had recurrent dislocations. In the emergency department, where he had gone for the dislocations, his shoulders had been reduced by closed methods and conservative treatment had been implemented. He had 3 previous dislocations in his right shoulder and 2 in his left shoulder. When he presented to our clinic, he did not have a history of trauma or seizure. On physical examination, he had minimal pain in his right shoulder and no apparent pain in his left shoulder. Both shoulders appeared symmetric, but convex contour of the deltoid muscle had disappeared. The arms were locked in external rotation and abduction. In both upper extremities, there was no motor, sensory, or vascular deficit. Direct radiography and computed tomography (CT) revealed that both shoulders were anteriorly dislocated (Figure 1). The patient did not have any finding of fracture, and his shoulders were reduced using the closed Kocher's technique under sedation and analgesia. After having controlled with direct radiography and CT, both arms were hung with a triangular sling in order to provide immobilization for 3 weeks (Figure 2). Then, he was referred to the physical therapy and rehabilitation unit. In the magnetic resonance imaging (MRI) performed in this period, the presence of bilateral Bankart lesions was detected. The patient was given necessary information, and his written informed consent was obtained.

DISCUSSION

The shoulder is the most frequently dislocating joint in the body (1). Dislocations are generally anterior. Becker and Weyand (4) reported in their series, including 8140 cases with shoulder dislocations, that only 139 (1.7%) patients had posterior dislocations (4). Concurrent bilateral shoulder dislocations are rarely encountered, and they are most commonly posterior (2). The first concurrent bilateral shoulder dislocation in literature was identified by Myenter in 1902 (5) and the first non-traumatic shoulder dislocation by Sargent in 1909 (3).

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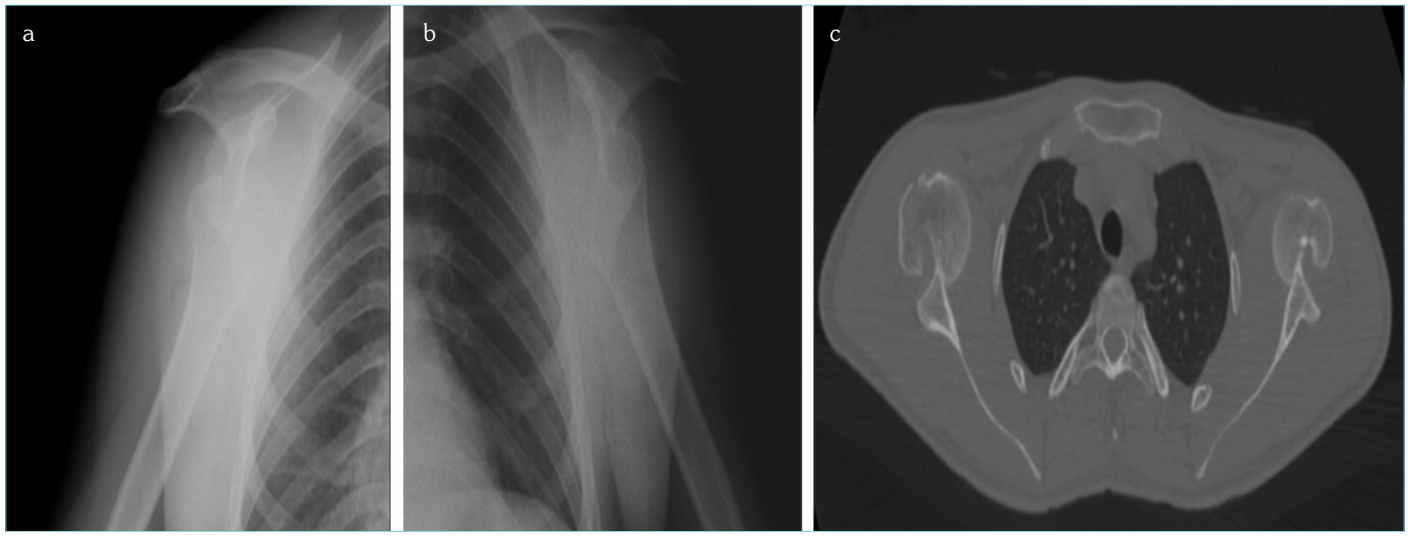

Figure 1. (a) Direct radiography of the right shoulder performed on admission (b) Direct radiography of the left shoulder performed on admission (c) CT scan performed at admission

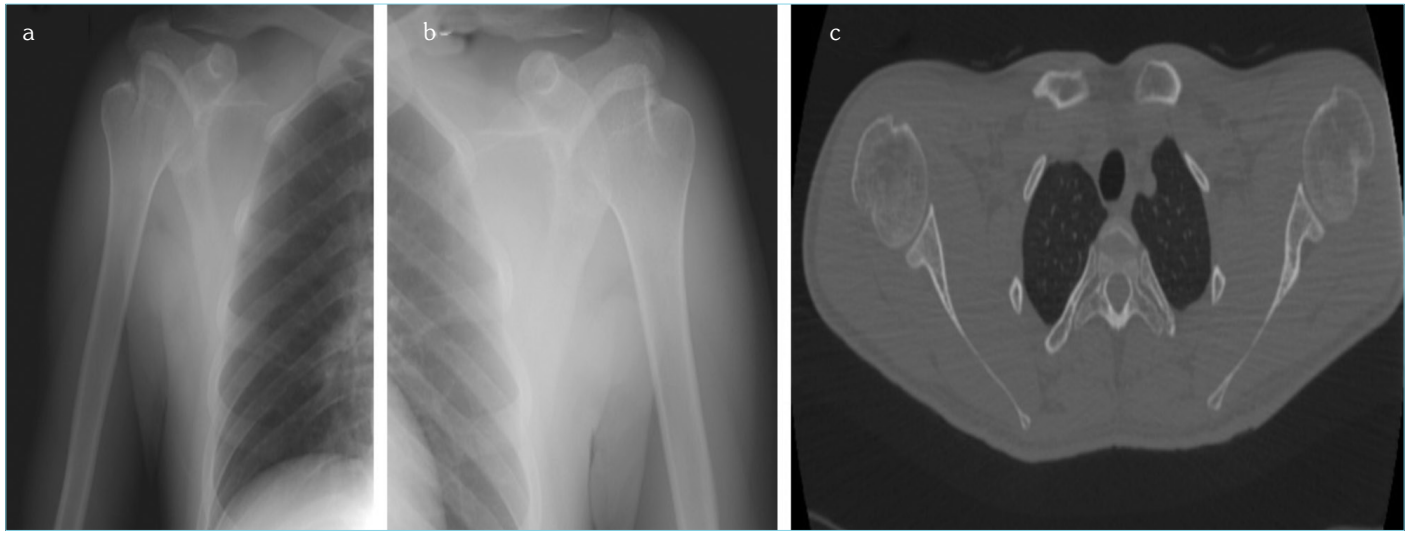

Figure 2. (a) Direct radiography of the right shoulder performed after reduction (b) Direct radiography of the left shoulder performed after reduction (c) CT scan performed after reduction

While the most common etiological factor in bilateral cases is trauma (50%), muscle contractions associated with seizures (epileptic, hypoglycemia, toxic, and hypoxic) are another main reason (37%). Of all cases, 15.7% are chronic patients (›3 weeks). In literature, 70 cases with concurrent bilateral shoulder dislocation have been reported. Of these cases, only 9 have occurred due to non-traumatic reasons (6).

The most frequently observed mechanisms in concurrent bilateral shoulder dislocations are stated to be forward traction and fall. The mechanism related to seizure is the arm's abduction, extension, and external rotation after direct (7) or indirect (8) trauma (9). In our patient, bilateral shoulder dislocation developed while he was asleep, his elbows on the table and his arms at abduction and external rotation.

Due to muscle contraction and neurovascular injury risk, reduction should be carried out as soon as possible after the diagnosis of dislocation is established. When suspicious glenohumeral dislocation cases present to the emergency department (in spite of it being rare), the possibility of neurovascular lesion should definitely be taken into consideration. Moreover, it should be known that some structures (the axillary nerve, musculocutaneous nerve, and brachial plexus) can be benefited during the reduction maneuver (10).

CONCLUSION

There is no consensus on the protocol to be followed after the intervention performed in the emergency department. Most of authors suggest that the arm should be exposed to immobilization in internal rotation and adduction until patient's pain stops (3–4 weeks). Then, active movements should be given with progressive pendular movements as much as patient can tolerate through physiotherapy. If there is instability or continuous pain, the presence of an additional lesion should be investigated (10).

Informed Consent: Written informed consent was obtained from the patient.

Peer-review: Externally peer-reviewed.

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REFERENCES

1. Turhan E, Demirel M. Bilateral anterior glenohumeral dislocation in a horse rider: a case report and a review of the literature. Arch Orthop Trauma Surg 2008; 128(1): 79-82. [CrossRef]
2. Fung DA, Menkowitz M, Chern K. Asymmetric bilateral shoulder dislocation involving a luxation erecta dislocation. Am J Orthop 2008; 37(5): E97-8.
3. Sargent PW. Case of bilateral dislocation of shoulder with marked muscular wasting. Proc R Soc Med 1909; 2(Neurol Sect): 37.
4. Becker R, Weyand F. Rare, bilateral posterior shoulder dislocation. A case report. Unfallchirurg 1900; 93(2): 66-8.
5. Mynter H. Subacromial dislocation from muscular spasm. Ann Surg 1902; 36(1): 117-9. [CrossRef]
6. Ballesteros R, Benavente P, Bonsfills N, Chacón M, García-Lázaro FJ. Bilateral anterior dislocation of the shoulder: Review of seventy cases and proposal of a new etiological-mechanical classification. J Emerg Med 2013; 44(1): 269-79. [CrossRef]
7. Ribbans WJ. Bilateral anterior dislocation of the shoulder following a grand-mal convulsion. Br J Clin Pract 1989; 43(5): 181-2.
8. Markel DC, Blasier RB. Bilateral anterior dislocation of the shoulders with greater tuberosity fractures. Orthopedics 1994; 17(10): 945-9.
9. Siwach R, Singh R, Rohilla R, Sangwan SS. Bilateral anterior dislocation of the shoulder - a case report and review of the literature. Injury Extra 2008; 39: 394-7. [CrossRef]
10. Wen DY. Current concepts in the treatment of anterior shoulder dislocations. Am J Emerg Med. 1999; 17(4): 401-7. [CrossRef]