

CASE REPORT AND REVIEW OF THE LITERATURE

Bilateral anterior shoulder dislocation: A case report of this rare entity

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Abstract

Unilateral shoulder dislocation is a common condition and often seen at trauma facilities worldwide. In general anterior shoulder dislocations are more common than posterior dislocations. Bilateral shoulder dislocations are rare and of these, bilateral posterior shoulder dislocations are more prevalent than bilateral anterior shoulder dislocations. Bilateral posterior shoulder dislocations are caused by seizures, electrical shock and hypoglycaemia. Bilateral anterior shoulder dislocation is mostly associated with trauma and most have accompanying fractures. We present a case of bilateral anterior shoulder dislocation following minor trauma, with no associated fractures.

Introduction

Bilateral anterior shoulder dislocation is a very rare entity and is commonly associated with fractures. Thorough clinical examination of the patient is mandatory in order to ensure that a bilateral dislocation is not missed. The following case report demonstrates a typical bilateral shoulder dislocation as a result of trauma.

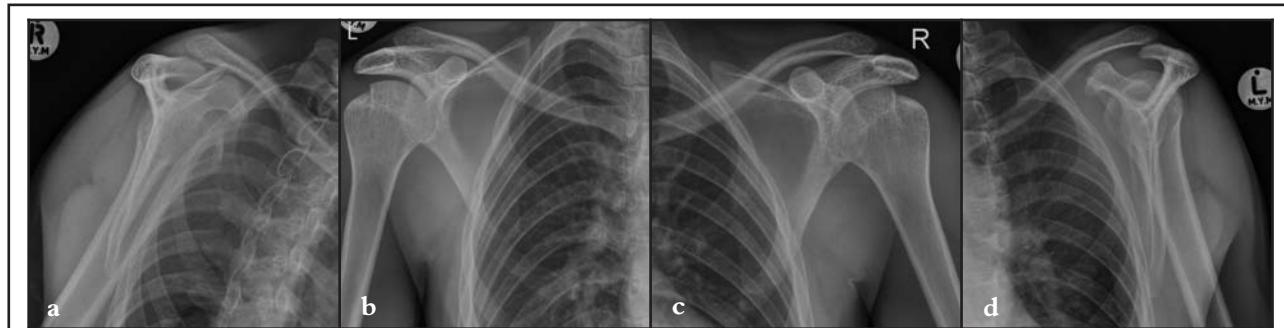
Case report

On 23 February 2010 a 27-year-old man presented at the trauma unit of Tygerberg Hospital complaining of shoulder pain involving both shoulders after trying to prevent a fall. He tried to prevent falling backward by extending both arms behind his back. Physical examination revealed a global, painful decreased range of motion in both shoulders. Examination revealed no neurologic or vascular deficit.

Both humeral heads were palpated in the anterior aspect of each joint and a clinical diagnosis of bilateral anterior shoulder dislocations was made. Radiological examination confirmed the diagnosis (*Figure 1*). No fractures were noted on the X-rays.



Figure 1.
AP X-ray showing bilateral anterior shoulder dislocations

**Figure 2a.**

Post-reduction lateral X-ray of right shoulder

Figure 2b.

Post-reduction AP X-ray of right shoulder

Figure 2c.

Post-reduction AP X-ray of left shoulder

Figure 2d.

Post-reduction lateral X-ray of left shoulder

Both shoulders were reduced in the trauma unit under procedural sedation. Reduction of both shoulders was obtained which was confirmed radiologically (Figures 2a-d). Examination after reduction revealed bilateral neurovascularly intact upper limbs. Both arms were immobilised in slings (Figure 3) and the patient was given a follow-up date to attend the outpatient clinic. The patient was told to use his arms only for personal hygiene purposes and eating and not to pick up any heavy objects. He however failed to attend the clinic and only returned four weeks later.

At follow-up the patient reported no pain and had returned to his normal activities of daily living with minimal discomfort. Physical examination revealed no signs of a Marfanoid habitus or of hyperlaxity. Both shoulders had near normal range of motion with pain only present at the extremes of motion. Both shoulders also had negative apprehension tests. Power was 5/5 in both shoulders. The patient was referred for physiotherapy but again failed to attend his follow-up dates.

Discussion

Bilateral dislocation of the shoulder is a rare entity. Bilateral shoulder dislocation was first described in 1902 in patients in whom excessive muscular contractions occurred as a result of Camphor overdose.¹

Evidence from the literature suggests that they are mostly posterior. Bilateral anterior dislocation however is still more rare. Dinopoulos *et al* in 1999 found only 28 reported cases since 1966.² Dunlop *et al* reported in 2002 of other cases in the literature, but most were associated with fractures. He also found that of the 44 cases, five were diagnosed late.³

Bilateral posterior shoulder dislocations occur mostly due to electrical shock, seizures or hypoglycaemic episodes, and these occur as a sequel of maximal involuntary muscle contractions. The weaker external rotating muscles are overpowered by the stronger internal rotators, resulting in adduction and internal rotation sufficient to dislocate the humeral head posteriorly.

**Figure 3.**

Example of how patient was immobilised

They occur mostly due to electrical shock, seizures or hypoglycaemic episodes, and these occur as a sequel of maximal involuntary muscle contractions

Unlike posterior dislocations, anterior dislocations occurred more commonly following trauma. Our patient had minor trauma after falling backwards with his arms extended behind his back. This is the first case reported of a patient dislocating both shoulder by this mechanism.

Cresswell and Smith reported a case of bilateral anterior dislocation of the shoulder without any fractures in a bench-pressing athlete.⁴

Singh and Kumar reported a case of sequential bilateral anterior dislocation in which the left shoulder dislocated first due to trauma followed by atraumatic dislocation of the right shoulder.⁵

Galois *et al*, Fung *et al* and Aufderheide *et al* have reported cases of asymmetrical bilateral shoulder dislocations,⁶⁻⁸ which are extremely rare.

The principles of management are the same as for unilateral dislocations. Early reduction and immobilisation should be followed by definite treatment, which may include active and passive physiotherapy or surgery in the younger, more active patient group.

Conclusion

In unilateral shoulder dislocations the incidence of posterior dislocations is markedly less than that of anterior shoulder dislocations. The opposite is true of bilateral shoulder dislocations. Bilateral anterior shoulder dislocations are the rarest of all shoulder dislocations.

Given that up to 10% of bilateral shoulder dislocations are misdiagnosed, which can lead to severe impairment of quality of life, it is important to perform a thorough clinical examination of the patient in order to exclude this rare entity.

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