

# Asymmetric Bilateral Shoulder Dislocation Involving a Luxatio Erecta Dislocation

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**W**e present the unusual case of posttraumatic asymmetric bilateral shoulder dislocations in a woman in her late 70s—an inferior dislocation of the glenohumeral joint (luxatio erecta) in the right shoulder and an anterior dislocation in the left shoulder. Bilateral shoulder dislocations and luxatio erecta dislocations are both rare by themselves, with only a few reported cases of each. To our knowledge, this is the first reported case of asymmetrical bilateral shoulder dislocations involving a luxatio erecta dislocation.

## CASE REPORT

After falling off an exercise treadmill and injuring her shoulders, a woman in her late 70s presented to our emergency department. She complained of pain and immobility in both shoulders. Her right arm was extended and fixed above her head, and her left arm was externally rotated and adducted.

The fixed deformities noted on physical examination suggested asymmetric bilateral shoulder dislocations. The patient had pain with passive motion of both arms. She was neurovascularly intact bilaterally.

X-rays confirmed a luxatio erecta dislocation on the right (Figure 1A) and an anterior dislocation of the shoulder on the left with fracture of the inferior left glenoid (Figure 1B).

Closed reduction was achieved without complications in both shoulders (Figures 2A, 2B). Reduction of the right shoulder was achieved by extension of the arm to a position equivalent to a traditional anterior dislocation, and then the external rotation method of reduction was used. Reduction of the left shoulder was achieved through the method described by Eachempati and colleagues.<sup>1</sup> Both arms continued to be neurovascularly intact and were placed in shoulder immobilizers. X-rays confirmed both reductions.

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Three days later, the patient was seen in a private orthopedic office. Physical examination revealed tenderness in both shoulders anteriorly with positive apprehension sign. The patient was able to raise both arms 75° with forward elevation, and external rotation to neutral was weak. In both shoulders, there was some stiffness, suggestive of possible rotator cuff tears. A magnetic resonance imaging (MRI) scan for further evaluation of the stiffness was not ordered because the patient was not a surgical candidate (she had a significant medical history), and the MRI results would not change her management or prognosis. Conservative management with physical therapy as tolerated was begun, and the patient regained full functioning and range of motion (ROM) in both arms.

## DISCUSSION

Shoulder dislocations, which most commonly occur in young males and are trauma related, can occur in all ages and both sexes. There is another peak in incidence in elderly women because of decreased cross-linking of collagen fibers of the joint capsule and increased incidence of falling. Ninety-six and one-half percent of all shoulder dislocations are anterior, 3% are posterior, and 0.5% are inferior.<sup>2,3</sup> Patients typically present with severe shoulder pain and decreased ROM. With anterior dislocations, the arm is held in abduction and external rotation with the humeral head palpable anteriorly. Patients are generally treated with conscious sedation and closed reduction techniques, followed by shoulder immobilization and follow-up within 5 to 7 days. Complications can include fractures, brachial plexus injury, vascular injury, soft-tissue injuries, and recurrent dislocations.<sup>2</sup>

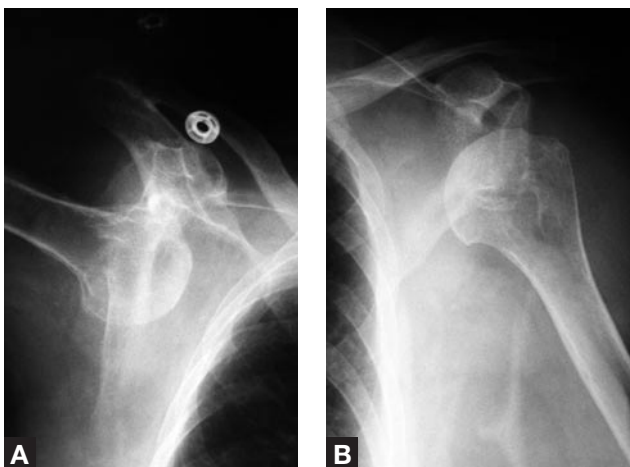
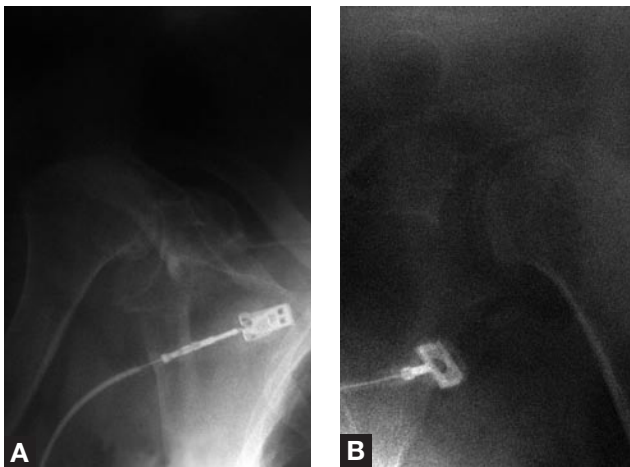


Figure 1. Anteroposterior x-rays of right (A) and left (B) shoulders.



**Figure 2.** Postreduction x-rays of right (A) and left (B) shoulders.

Inferior dislocations of the glenohumeral joint, also known as luxatio erecta, are very rare (~0.5% of all shoulder dislocations).<sup>3</sup> The mechanism of injury is usually hyperabduction and extension of a pronated arm causing the proximal humerus to be levered over the acromion process.<sup>4</sup> Classically, the arm is abducted with the elbow flexed and the hand above the head.<sup>4</sup> Reduction is usually achieved with traction-countertraction, immobilization, and physical therapy as tolerated.<sup>3</sup> Complications of inferior dislocations include fracture of the greater tuberosity or a rotator cuff tear in 80% of patients, neurologic compromise in 60% of patients, and vascular compromise in 3.3% of patients.<sup>5</sup>

Bilateral shoulder dislocations are also rare, with few cases reported in the literature. Most commonly seen are bilateral posterior shoulder dislocations, usually following epileptic episodes, drug-induced seizures, electroconvulsive therapy, neuromuscular deficiencies, or severe emotional disturbances.<sup>2,6-8</sup> Bilateral anterior shoulder dislocations are even more uncommon, with only 8 reported cases in the literature, most commonly due to trauma from weight-lifting accidents and other accidents, but have also been associated with seizures and diabetic nocturnal hypoglycemia.<sup>6,7,9,10</sup> There have only been 3 reported cases of asymmetric bilateral shoulder dislocations. All involved anterior and posterior dislocation. Two cases were due to trauma, and 1 was related to alcohol and seizures.<sup>2,9</sup>

Our reported case of posttraumatic, simultaneous, asymmetric, bilateral shoulder dislocations involving a luxatio erecta and an anterior dislocation is extremely rare. Our patient's injuries were due to trauma; unfortunately, the exact mechanisms of injury are unknown. Two weeks after injury, the patient returned with an anterior disloca-

tion of the left shoulder. She was treated with a proper closed reduction technique, conservative management, and physical therapy. By 1-year follow-up, she had regained full function and ROM in both extremities and had not sustained any additional dislocations.

Shoulder dislocations are often taken for granted in the emergency department. Reduction methods and complications for anterior, posterior, and inferior dislocations vary. Inferior and posterior dislocations should be ruled out, as they can easily be overlooked as an anterior dislocation. An axillary x-ray should be ordered along with routine shoulder x-rays to further assess the type of dislocation.

## CONCLUSIONS

With appropriate treatment of an uncomplicated shoulder dislocation, and after reduction, patients should regain full function and strength. Our patient's ROM and strength—immediately and weeks after reduction—were limited, which suggests a possible complication of her injury. In surgical candidates, MRI should be ordered to evaluate for possible rotator cuff tear and other shoulder pathology.

The present case also emphasizes the importance of physical therapy as a conservative treatment for shoulder pathology. With appropriate physical therapy and muscle strengthening, patients can regain full function and avoid future dislocations.

## AUTHORS' DISCLOSURE STATEMENT

The authors report no actual or potential conflict of interest in relation to this article.

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