Bilateral Traumatic Anterior Dislocation of Shoulder - A Rare Entity

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Abstract

Introduction: Bilateral shoulder dislocation are most commonly posterior type. These are most commonly due to seizure disorder and electrocution. Anterior shoulder dislocations occurring bilaterally without any predisposing factors are very rare. These types of injuries are due to trauma with a unique mechanism of injury. To best of our knowledge there are only few cases of similar kind are reported in literature. We hereby report a interesting case of posttraumatic, bilateral anterior dislocation of shoulder without associated fracture in a 45 old women without any predisposing pathoanatomy.

Case report: A 45-year-old women presented to casualty with sudden onset of pain and restriction of movement in both shoulders following trauma. Immediately post trauma she had severe pain and restriction of both shoulders. On examination arms were abducted and externally rotated. Bilateral shoulder movements were painful and restricted. There was loss of round contour of shoulder with increased vertical diameter of axilla anteriorly. Radiological examination revealed bilateral anterior dislocation of the shoulders without any associated fractures. Closed reduction done by Milch technique after intraraticular lignocaine injection. MRI of bilateral shoulder showed no pathological lesion. Both shoulders were immobilized with a shoulder immobilizer for three weeks.

Conclusion: Most of the bilateral shoulder dislocations are posterior type seen in seizure disorders. Bilateral traumatic anterior shoulder dislocations are rare and are seen as a result of unique mechanism of injury. In our case patient had a fall on her elbows causing forced extension. If diagnosed and treated promptly completely normal function of the shoulders can be restored.

Keywords: Bilateral; dislocation; traumatic; shoulder.
fracture in a 45 old women.

**Case Report**

A 45-year-old women presented to Lok Nayak Hospital, New Delhi, India in August 2010 with sudden onset of pain and restriction of movement in both shoulders following trauma. Patient slipped while walking downstairs and fell down over pointed elbows. Immediately post trauma she had severe pain and restriction of both shoulders. She had no history of seizure, epilepsy, previous shoulder dislocation or instability in other joints. On examination arms were abducted and externally rotated. Bilateral shoulder movements were painful and restricted (figure 1). There was loss of round contour of shoulder with increased vertical diameter of axilla anteriorly. Radiological examination revealed bilateral anterior dislocation of the shoulders without any associated fractures (figure 2).

Closed reduction done by milch technique after intrarticular lignocaine injection. Post reduction radiographs showed congruent reduction (figure 3). MRI of bilateral shoulder showed no pathological lesion. Both shoulders were immobilized with a shoulder immobilizer for three weeks. Mobilisation with strengthening the rotator cuff and deltoid muscles started after three weeks.

### Discussion

Majority of the bilateral shoulder dislocations are of posterior type most commonly seen during convulsion, electric shock or hypoglycaemic seizures. Posterior type is common in these conditions due to violent contractions of the muscles of the shoulder girdle [8-10]. Unlike posterior dislocations anterior type occur more commonly following significant trauma. Bilateral occurrence of anterior shoulder dislocation is rare because of the fact that one extremity takes the brunt of the impact. To best of our knowledge only three cases of bilateral anterior dislocations are reported in literature. In two of the three cases reported were sequential, one sided followed by contra lateral side dislocation. In our case impact is same on both shoulders at the same time.

The mechanism of anterior dislocation is forced extension, abduction and external rotation of the arm. In our case mechanism of injury was forced extension as the

<table>
<thead>
<tr>
<th>Author</th>
<th>Mechanism of injury</th>
<th>Systemic disease</th>
<th>Associated fractures</th>
<th>Journal and year</th>
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<tr>
<td>Turhan E, Demirel M.</td>
<td>Fall</td>
<td>Nil</td>
<td>No fracture</td>
<td>Arch Orthop Trauma Surg. 2008</td>
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<tr>
<td>N Lasanianos, G Mouzopoulos</td>
<td>Seizure episode</td>
<td>Seizure disorder</td>
<td>Greater tuberosity fracture, Hill Sachs lesion</td>
<td>Cases journal, 2008</td>
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<td>Abalo et al</td>
<td>Fall</td>
<td>Nil</td>
<td>Nil</td>
<td>Chir main, 2008</td>
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<tr>
<td>Mofidi et al</td>
<td>Seizure episode</td>
<td>Generalised tonic clonic seizure</td>
<td>Temporomandibular dislocation</td>
<td>American journal of emergency medicine, 2010</td>
</tr>
<tr>
<td>Faycal Dilmi et al</td>
<td>Diving into water</td>
<td>Nil</td>
<td>Nil</td>
<td>J Orthop Traumatol. 2012</td>
</tr>
<tr>
<td>Felderman H et al</td>
<td>Workout(chin up exercises)</td>
<td>Nil</td>
<td>Nil</td>
<td>J Emerg med, 2009</td>
</tr>
<tr>
<td>Our case</td>
<td>Fall from stairs</td>
<td>Nil</td>
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</table>

**Table 1: Comparison of various bilateral anterior dislocations reported.**
patient fell on her pointed elbows. Mechanism of injury, systemic disease and associated fractures in various similar cases is depicted in table 1.

Croswell and Smith reported a case of bilateral anterior dislocation of the shoulder without any fractures in a bench-pressing athlete [11]. In an unusual mechanism of injury weight on the bar forced his arms into hyperextension in the mid-abducted position. The humeral shaft gradually pivoted on the bench and the humeral heads were slowly dislocated interiorly by the weight of the bar.

Sandeep Singh and Sudhir 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[12].

Sreesobh K V et al reported a case of sequential bilateral dislocation in a chronic alcoholic in which an atraumatic dislocation of the right shoulder is followed by traumatic dislocation of the left.

Closed reduction of both shoulder dislocation carried out under general anaesthesia by Milch manoeuvre [13]. Patient was immobilized with a shoulder immobilizer for three weeks. MRI of bilateral shoulder showed no other pathological lesion. Mobilisation with strengthening the rotator cuff and deltoid muscles started after three weeks. Six months after follow up patient had full range motion without any instability.

**Conclusion**

Bilateral anterior shoulder dislocation following a trauma is very rare occurrence. This type of dislocation involves a unique type of mechanism injury and in our case it was fall on pointed elbow causing forced extension.

**Clinical Message**

Bilateral anterior shoulder dislocations most commonly because of seizures. Traumatic bilateral anterior dislocations without any pathologic lesion are very rare with only few cases reported in literature. These types of dislocations are due to unique mechanism of injury. When diagnosed and treated promptly lead to restoration of completely normal shoulder joints.

**References**

12. Sreesobh K V, Bennetchacko, Raffic: An Unusual Case of Bilateral Anterior Dislocation OfShoulder.ISSN 0972-978X

**How to Cite this Article:**