Two Mechanisms of Scapular Winging Visualized in a Patient With Parsonage-Turner Syndrome

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Case Summary

A 29 year old male presented 4 months after acute onset pain followed by bilateral shoulder weakness (video). He was undergoing intense police academy training at the time of onset. Left shoulder/cervical MRIs shortly after symptom onset were normal. Electromyography at 4 months showed widespread reinnervation changes of the proximal right upper extremity, pronounced in the serratus anterior. There were widespread reinnervation changes of the proximal left upper extremity, pronounced in the trapezius. Fourteen months after the onset of symptoms, and following intensive physical therapy, the patient showed significant improvement in bilateral shoulder function but still notable right medial scapular winging.

Video Legend: Description of scapular winging mechanisms observed in this patient

During shoulder flexion, serratus anterior activation pulls the scapula inferior angle laterally. Right inferior angle immobility indicates weakness of serratus anterior (medial scapular winging). During shoulder abduction, the trapezius rotates and elevates the scapula superior medial border. Left superior medial border protrusion indicating trapezius weakness (lateral scapular winging).

Appendix 1. Authors

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Contribution</th>
</tr>
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<tbody>
<tr>
<td>Austin R. Thompson, BS</td>
<td>Portland, OR</td>
<td>Video transcript and editing</td>
</tr>
<tr>
<td>Erik R. Ensrud, MD</td>
<td>Portland, OR</td>
<td>Video concept and narration</td>
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References

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