

Stiffness with rotator cuff problem

Dept. Orthopaedic Surgery Eulji University Hospital

Kwang-Won Lee, M.D., PhD.

Classification of shoulder stiffness

- Primary / Secondary (Lundberg's)
- Idiopathic / Post-traumatic stiff shoulder (Matsen)

Idiopathic, Primary

- Idiopathic
- Global limitation
- Contracture and loss of compliance of the glenohumeral joint capsule

Post-traumatic, Secondary

- Injury, low level repetitive trauma
- Contracture of structures participating in the glenohumeral or humeroscapular motion interfaces

Shoulder stiffness is common in patients with rotator cuff tears. But, there are few reports regarding the management of rotator cuff tears and stiff shoulder. A complete history and P/E of the patient with a stiff and painful shoulder is essential to determine the cause and location of pathology.

Pathophysiology

Loss of E/R with the arm at the side: contracture of the AS aspect of the shoulder,
Loss of E/R and ABD: contracture of the AI capsule
Loss of I/R: contracture of the posterior capsule
Loss of global restriction: rare condition.

Rotator cuff disease alone is highly unlikely to restrict passive E/R.

Obligate translation:

Tightness of capsule (esp. posterior capsule) common in chronic pain syndrome of shoulder
Dynamic cephalad migration of head
Impingement of cuff under the coracoacromial arch (Subacromial impingement)

M/C in partial thickness cuff lesions:

- Particularly in flexion, I/R, and cross-body movement owing to selective contracture of the posterior capsule.
- Confused with "impingement syndrome"

Treatment

- A shoulder that is stiff before rotator cuff surgery is likely to remain stiff after repair. The pain the patient hopes to resolve may be unchanged or worse after surgery.
- The stiffness usually does not respond to non-surgical treatment and interferes with the normal recovery after repair.
- If a patient has a rotator cuff tear and shoulder stiffness develops secondarily, it is important to treat the shoulder stiffness as the primary problem to fully recover range of motion before considering a rotator cuff repair.
- A rotator cuff tear may improve with rehabilitation alone, and a repair is often a "shoulder-tightening" procedure that may result in increased stiffness postoperatively.
- Exercises must specifically address any shoulder stiffness that may cause oblique translation and loss of concentricity on shoulder movement.
- If the stiffness cannot be resolved before surgery, A/S capsular release can be performed before surgery or included with the rotator cuff repair.
(staged or all-in-one procedure)
- The patients should be warned of a much higher likelihood of postoperative stiffness that may require another procedure.

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