

Specialty area: Challenges in MSK Imaging: Rotator Interval

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Highlights

- Review rotator interval anatomy with arthroscopic correlation
- Discuss rotator interval and biceps pulley tears
- Demonstrate the MR findings of adhesive capsulitis in the rotator interval

Title: What is the Rotator Interval, & Why Is It Important?

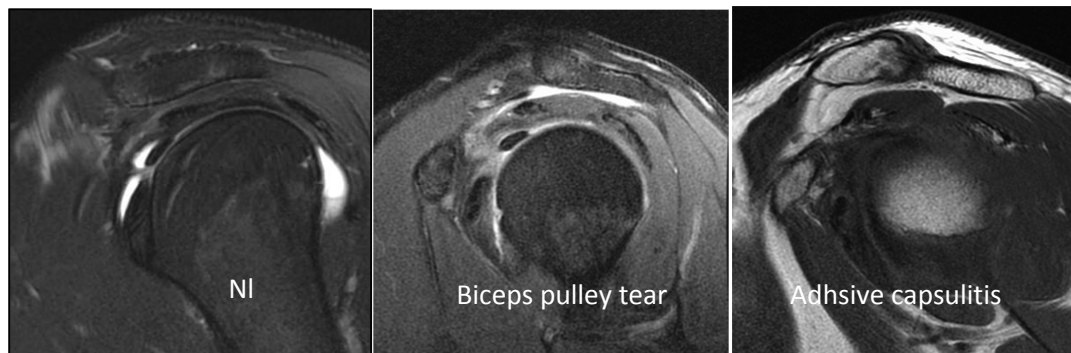
Target audience: – Radiologists who read shoulder MR

OUTCOME/Objectives: – After this talk, learners will be able to recognize the boundaries and contents of the rotator interval (RI). Learners will also be able to recognize tears of the rotator interval, and which tears cause microinstability and which cause biceps dislocation. Learners will also be able to identify the MR findings of adhesive capsulitis.

PURPOSE: – The rotator interval can be a confusing region, yet tears in this area are often symptomatic.

METHODS: – We review MR images of the common lesions of the rotator interval.

RESULTS: – Rotator interval tears can be divided into microinstability lesions and biceps pulley tears. The appearance of adhesive capsulitis is partly dependent on the phase of the disease, but there are several constant findings.



DISCUSSION: - The rotator interval is bounded by the supraspinatus and subscapularis tendons, and the base of the coracoid process medially and the transverse humeral ligament laterally. The interval contains the joint capsule, the long head of the biceps tendon, the coracohumeral ligament, and the superior glenohumeral ligament. Perforations of the RI capsule, such as after an arthrogram or arthroscopy, usually heal without symptoms. Tears of the coracohumeral ligament may cause posteroinferior microinstability. Tears of the superior glenohumeral ligament and lesser tuberosity insertion portion of the coracohumeral ligament lead to dislocation of the long head biceps tendon. In patients with adhesive capsulitis you can see a thickened coracohumeral ligament, pericapsular increased T2 signal, and fibrosis within the subcoracoid fat.

CONCLUSION: – It is important to carefully evaluate the rotator interval on MR images, especially in patients with microinstability, biceps instability, or painful loss of motion.

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