Multimedia article. The rotator interval: pathology and management.

Abstract:

The rotator interval describes the anatomic space bounded by the subscapularis, supraspinatus, and coracoid. This space contains the coracohumeral and superior glenohumeral ligament, the biceps tendon, and anterior joint capsule. Although a definitive role of the rotator interval structures has not been established, it is apparent that they contribute to shoulder dysfunction. Contracture or scarring of rotator interval structures can manifest as adhesive capsulitis. It is typically managed nonsurgically with local injections and gentle shoulder therapy. Recalcitrant cases have been successfully managed with an arthroscopic interval release and manipulation. Conversely, laxity of rotator interval structures may contribute to glenohumeral instability. In some cases this can be managed with one of a number of arthroscopic interval closure techniques. Instability of the biceps tendon is often a direct result of damage to the rotator interval. Damage to the biceps pulley structures can lead to biceps tendon subluxation or dislocation depending on the structures injured. Although some authors describe reconstruction of this tissue sling, most recommend tenodesis or tenotomy if it is significantly damaged. Impingement between the coracoid and lesser humeral tuberosity is a relatively well-established, yet less common cause of anterior shoulder pain. It may also contribute to injury of the anterosuperior rotator cuff and rotator interval structures. Although radiographic indices are described, it
appears intraoperative dynamic testing may be more helpful in substantiating the diagnosis. A high index of suspicion should be used in association with biceps pulley damage or anterosuperior rotator cuff tears. Coracoid impingement can be treated with either open or arthroscopic techniques. We review the anatomy and function of the rotator interval. The presentation, physical examination, imaging characteristics, and management strategies are discussed for various diagnoses attributable to the rotator interval. Our preferred methods for treatment of each lesion are also discussed.