



Long head of biceps pathology

Biceps Tendonitis

The long head of biceps tendon (LHB) attaches to the shoulder socket rim at its anchor on the superior aspect. The tendon is an intra-articular structure at this point, passing along the rotator interval until it enters the bicipital groove.

This tendon is a useful landmark in shoulder arthroscopy. The tendon is stabilised in the groove by a pulley, anteriorly and supraspinatus insertion, posteriorly.

Biceps tendonitis may be caused by direct injury, impingement with an acromial spur and instability of the tendon (associated with rotator cuff tears).

The pain is anterior and radiates down the arm. It is worse with elbow flexion and overhead activities. Clinical tests include the Speed, O'Brian and Yergason tests. MRI or USS can be used for investigations.

If untreated, this can lead to complete rupture of the tendon. Once this happens, the tendon is retracted down the arm leading to the Popeye sign. If this occurs in the elderly with rotator cuff tear, then it is best treated conservatively. If it occurs in the young (associated with heavy lifting and weights), then a tenodesis may be indicated.

Conservative management includes rest, activity modification, anti-inflammatories and physiotherapy. Steroid injections also play a role here. In experienced hands, these can be carried out in the outpatient department, but more often are referred to radiologists for ultrasound-guided injections.

Surgery is predominantly arthroscopic. Biceps tenodesis is the treatment of choice for the more active patients. It preserves biceps strength and avoids the Popeye sign, which is of concern cosmetically. The procedure is however technically challenging. Since 50% of biceps pathology is extra-articular, I prefer performing the tenodesis extra-articular. This involves cutting the tendon arthroscopically and delivering it through a small anterior skin incision. A special interference screw is used to secure the tendon to the anterior shaft of the humerus. This procedure will include a period of restriction in movement afterwards, sling for 3 weeks.

Biceps tenotomy is a simpler and quicker procedure but results in some weakness and a 35% chance of Popeye sign occurring. It may also be associated with biceps pain. It is performed arthroscopically and the patient is mobilised immediately afterward.

SLAP (superior labrum anterior posterior) Lesions

A SLAP tear usually occurs with heavy forceful lifting, repeated overhead activity (tennis, throwing) or a fall on the outstretched hand.

SLAP lesions are classified into 4 types:

Type I - Fraying of the superior labrum is seen. The biceps anchor is intact. Treatment: Debridement of the frayed edge.

Type II -The superior labrum is detached with detachment of the biceps anchor. Treatment: Debridement of the superior glenoid rim and reattachment of biceps and labrum.

Type III - A bucket-handle type tear of the superior labrum with the biceps anchor intact. Treatment: Resection of the tear.

Type IV - A bucket-handle type tear of the superior labrum with extension into the biceps tendon. Part of the biceps anchor is still intact. Treatment: Resection of tear and if more than 50% of the tendon is involved, tenodesis is recommended.

If conservative treatment doesn't help the patient, they can be treated surgically. Type I – arthroscopic debridement is often sufficient. Type II – the labrum is reattached using an anchor, positioned at 12 O'clock. Type III – the bucket-handle tear is excised and the remnant is reattached. Type IV – the tear is resected but biceps tenodesis may be required.