

BICEPS TENDONITIS

It is inflammation in the proximal biceps tendon that attaches the top of the biceps muscle to the shoulder.

Applied anatomy

Long head biceps tendon is 9 cm long

It originates 30% from Supraglenoid tubercle and 70% from Labrum

This tendon is intra-articular and it runs in the rotator interval [Between Supraspinatus and Subscapularis]

Other structures in the rotator interval

1. Ligaments: Coraco-humeral ligament
2. Superior gleno-humeral ligament
3. Deep to ligament is Biceps tendon

Intertubercular groove

Floor: Fibres from the Subscapularis runs in the floor

Roof: is formed by the Supraspinatus and transverse humeral ligament

Function of biceps

1. Elbow flexion and supination
2. Shoulder: contributes to anterior stability. With rotator cuff, it fixes the humeral head
3. The long head of the biceps proximally connects to the glenoid. It also blends with the cartilage rim around the glenoid, the labrum. The labrum is a rim of soft tissue that turns the flat surface of the glenoid into a deeper socket. This arrangement improves the fit of the ball that fits in the socket, the humeral head.

Pathogenesis

- 1 Repetitive shoulder actions can cause overuse of the biceps tendon.
- 2 Athletes who throw, swim, or swing a racquet or club are at greatest risk.
3. Age related tendinoses
4. Biceps tendonitis can happen from a direct injury, such as a fall onto the top of the shoulder. A torn transverse humeral ligament can also lead to biceps tendonitis secondary to biceps instability.

5. Biceps tendonitis sometimes occurs in response to other shoulder problems, including: rotator cuff tears, shoulder impingement, shoulder instability

Habermeyer and Walch classification

I. Origin of the tendon

SLAP lesion[Ryder}

I Fray of glenoid labrum

II Labrum with biceps detachment

III Bucket handle of Labrum

IV Bucket handle extending to biceps

II Interval lesion I Tendinitis

II Rupture

III subluxation

III Associated lesions Cuff Tendonitis

Subluxation [with subscapularis rupture]

Cuff rupture

Clinical

Patients generally report the feeling of a deep ache in the anterior shoulder

Pain is usually made worse with overhead activities.

The arm may feel weak to bend the elbow with forearm in supination

A catching or slipping sensation felt near the top of the biceps muscle may suggest a tear of the transverse humeral ligament.

Palpation of biceps tendon []anterior to the acromion with shoulder in 10° internal rotation.

May have positive provocative test

Yargasson's Test, Speed Test, Abbott and Saunders test may be positive



X-rays: can show if there are bone spurs or calcium deposits near the tendon.

Ultra sound is useful

MRI: magnetic resonance imaging (MRI)

Arthroscopy is an invasive way to evaluate shoulder pain.

Nonsurgical Treatment

1. Anti-inflammatory medicine
2. Physical or occupational therapist.
3. An injection of cortisone may be used to try to control pain.

Surgery

Surgery may be recommended if problem is resistant to non-operative treatment.

Acromioplasty

The most common surgery for bicipital tendonitis is acromioplasty, especially when the underlying problem is shoulder impingement.

Biceps Tenodesis

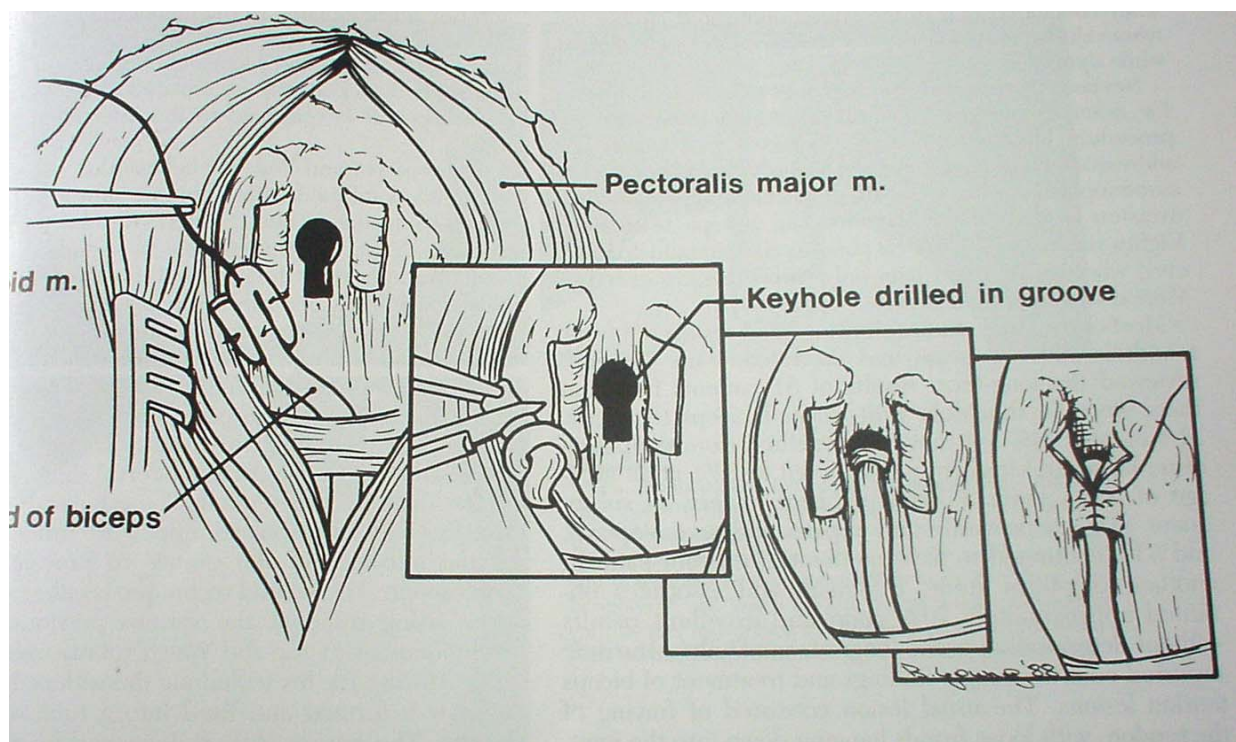
Biceps tenodesis is performed when tendon is severely degenerated.

Biceps tenodesis is a method of reattaching the top end of the biceps tendon to a new location.

A common way to do this surgery is called the keyhole technique. [Froimson: Keyhole Tenodesis].

The keyhole describes the shape of a small hole made by the surgeon in the humerus. The end of the tendon is slid into the top of the keyhole and pulled down to anchor it in place.

This operation gives 90% good results



PROXIMAL BICEPS RUPTURES

It occurs in people who are between 40 and 60 years old.

People in this age group who've had shoulder problems for a long time are at most risk.

A rupture of the biceps tendon can happen from a seemingly minor injury.

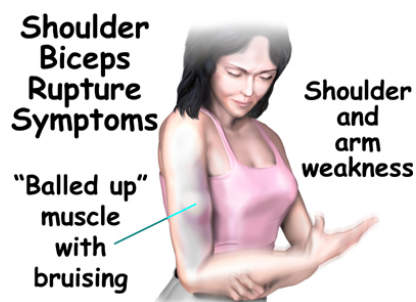
Diagnosis

Patients often recall hearing and feeling a snap in the top of the shoulder.

Immediate and sharp pain. The pain often subsides quickly with a complete rupture because tension is immediately taken off the pain sensors in the tendon.

Bruising may develop in the middle of the upper arm and spread down to the elbow.

The biceps may appear to have balled up, especially in younger patients who've had a traumatic biceps rupture. The arm may feel weak at first with attempts to bend the elbow or lift the shoulder.



It can be treated without surgery. This is especially true for older individuals who can tolerate loss of arm strength or if the injury occurs in the nondominant arm. A ruptured biceps reduces supination strength by about 20 percent and flexion strength by 10%.

Recently it has been reported that the both arthroscopic biceps tenotomy and arthroscopic biceps tenodesis can effectively treat severe pain or dysfunction caused by an irreparable rotator cuff tear associated with a biceps lesion where pain limits abduction [ie., Abduction possible after lignocaine test] . True pseudoparalysis of the shoulder and severe rotator cuff arthropathy are contraindications to this procedure.