



QUESTION | WHEN DO YOU ADVISE A PATIENT TO HAVE A BICEPS TENODESES AND WHEN IS A TENOTOMY MORE ADVISABLE. I HAVE A 40 YEAR OLD MALE IN A HEAVY LIFTING OCCUPATION AND I WAS WORRIED ABOUT STRENGTH LOSS WITH A TENOTOMY. HE IS NOT CONCERNED ABOUT COSMETIC APPEARANCE. IT'S HIS RIGHT SHOULDER AND HE IS RIGHT HANDED.

ANSWER | Patients who have pain from their biceps tendon and fail conservative treatment may be suitable candidates for biceps surgery. This is typically when they have biceps inflammation, degeneration or instability. In most cases it is better to address the biceps tendon than to attempt to repair SLAP tears where the labral anchor is degenerate.

Biceps tendon pathology is often overlooked as a cause of shoulder pain.

The long head of Biceps has origin from the superior glenoid where it is anchored to the superior labrum. This relatively avascular tendon travels through the shoulder joint exiting, while making a 90 degree turn, through a narrow tunnel into the biceps groove and down the arm. The entry to the biceps groove (biceps pulley) is an area where the tendon can be subject to significant forces and damage.

Biceps pathology can be divided into the following groups

1. Inflammatory
2. Traumatic
3. Instability

Injury to the biceps can be caused by

- Longitudinal arm traction
- Repetitive microtrauma – mainly overhead

Clinical examination is not precise. The best test is that of tenderness over the biceps tendon. The Speed's test and O'Brien's test will not differentiate between pathology in the tendon as opposed to a SLAP lesion.

Radiology tests are not particularly helpful. An MRI with contrast will help exclude other pathology involving the labrum and rotator cuff and is useful for instability of the biceps. No test is accurate for traumatic or inflammatory lesions of the tendon.

One should rely on history and point tenderness over the biceps in the biceps groove.

Nonoperative treatment includes

- Injection of cortisone into BT sheath or GH joint
- NSAIDs
- Rest from precipitating activity
- Physiotherapy – mainly RC program

The results of nonoperative treatment are variable. The results are good in low demand patients but poor in high demand patients (those involved in repetitive and overhead activities e.g. weight training).

The function of the long head of biceps (lhb) is thought to involve stabilising the humeral head in the overhead position, and depressing the humeral head. It has been postulated that a tenotomy or rupture of the lhb leads to loss of elbow flexion and supination strength. Shank et al (*Arthroscopy: The Journal of Arthroscopic and Related Surgery, Vol 27, No 1 (January), 2011: pp 9-16*) showed that in asymptomatic patients who have had biceps tenotomy or tenodesis, no statistically significant forearm supination or elbow flexion strength differences existed in the involved extremity between the 2 study groups.

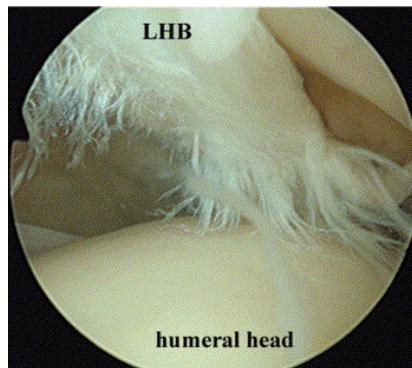


Fig 1 – frayed long head of Biceps

A biceps tenotomy is a simple operation which leads to excellent pain relief but causes a slight cosmetic deformity in the arm. People that participate in activities that stress the biceps can develop biceps spasm.



Fig 2 – ruptured long head of Biceps

A biceps tenodesis is a larger procedure that can take 6 months to recover, and should be reserved for the patient who does activities that stress the biceps or does heavy lifting, both of which can cause biceps spasm.

My indication for a tenodesis as opposed to a tenotomy are

- Manual workers
- Patients involved in heavy lifting, or repetitive and overhead activities
- Swimmers, gym goers and racquet sportsmen

Thus for the patient in question, I would recommend a tenodesis rather than a tenotomy, to avoid post operative biceps spasm. Strength is likely to be similar whatever technique is used.

REFERENCES

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