KEY PROCEDURES

TRICEPS TENDON REPAIR

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Published outcomes of this procedure can be found at: *J Bone Joint Surg Am.* 2003 Oct;85(10):1961-7.

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Abstract

Although triceps tendon ruptures can result from a traumatic incident, chronic overuse causing degenerative changes to the insertion and leading to a complete or partial rupture is more common. In our practice, we have found that anabolic steroid abuse by weightlifters is the most common predisposing factor. The initial diagnosis is often missed. A thorough clinical examination is imperative to avoid missing a partial or complete rupture. Ultrasound or magnetic resonance imaging can confirm the diagnosis. Early diagnosis increases the chance of a direct repair. Operative treatment with direct repair is usually indicated for full-thickness or large partial-thickness tears. Direct repair may be possible for selected chronic tears. Triceps tendon repair is performed with the following steps.

- Step 1: The patient is placed in lateral decubitus.
- Step 2: The stump is debrided, and retraction of the tendon is evaluated.
- Step 3: Two crossed bone tunnels are drilled, and an anchor is placed centrally in the olecranon.
- Step 4: The elbow is extended, and the tendon is reduced and sutured centrally to the anchor and medially and laterally with use of the sutures from the bone tunnels.
- Step 5: The elbow is flexed to evaluate tension. If gapping occurs, the repair should be reinforced with extra sutures. Tension-free range of motion will guide postoperative rehabilitation.
- Step 6: A posterior splint is applied in the operating room with the elbow extended.
- Step 7: A dynamic brace is applied on the first postoperative day. Extension is free but flexion is blocked at the tension-free range; 30° of extra flexion is permitted every 2 weeks. Full flexion is always allowed after 6 weeks. Strengthening starts at 3 months.

Pitfalls of the procedure include difficulty in differentiating between tendon and scar in subacute and chronic ruptures. It may not be possible to directly repair the triceps back to bone, and a graft may be needed to reconstruct

Disclosure: The authors indicated that no external funding was received for any aspect of this work. On the **Disclosure of Potential Conflicts of Interest** forms, which are provided with the online version of the article, one or more of the authors checked "yes" to indicate that the author had a relevant financial relationship in the biomedical arena outside the submitted work (<http://links.lww.com/JBJSST/A202>).

the tendon. It is important to know where the ulnar nerve is and to release it if needed. It is important not to debride past the cortical surface of the olecranon if an anchor is used because, if this is done, fixation may be insufficient. The anchor should be predrilled as the cortical bone of the tip of the olecranon is very dense.

Reruptures occur in up to 21% of cases. A functional range of motion is usually achieved with an average loss of extension of 10° and average flexion to 136°. At 1 year, one can expect a peak strength of approximately 80% of that on the uninjured side and endurance strength of 99%¹.

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