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Joint Preservation

Technique Guide

**VersiTomic
G-Lok®**
Distal Biceps Repair



Michael Rauh, M.D.

*The opinions expressed are those of Dr. Rauh
and are not necessarily those of Stryker.*

Distal Biceps Repair

Michael Rauh, M.D. is an Orthopaedic Sports Medicine specialist at the University at Buffalo. His surgical cases focus on the latest techniques in arthroscopic surgery of the knee, shoulder, and elbow, as well as, general orthopaedic reconstructive surgery, and trauma surgery. During his Sports Medicine Fellowship at the renowned Cleveland Clinic, Dr. Rauh worked with the Cleveland Browns, Indians, and Cavaliers. While in Buffalo, Dr. Rauh serves as the medical director and team physician for the Buffalo Bandits of the National Lacrosse League. Dr. Rauh is the Clinical Assistant Professor of Orthopaedic Surgery for the School of Medicine and Biomedical Sciences, University at Buffalo, where he teaches orthopaedic sports medicine fellows, residents, medical students, and conducts research.



Michael Rauh, M.D.

*Orthopaedic Sports Medicine specialist at the University at Buffalo and
Clinical Assistant Professor of Orthopaedic Surgery, School of Medicine and Biomedical Sciences, University at Buffalo*

Introduction

Patients who sustain ruptures of the distal biceps tendon have traditionally been subjected to a two incision approach championed by Boyd and Anderson. Recent modifications of this approach have resulted in an anterior one incision technique. A systematic review of these techniques has been recently published. With the two incision approach, a greater loss of forearm rotation, and unsatisfactory clinical results have been shown. Additionally, fixation with a suspensory device does yield one of the highest loads and stiffness available from current fixation methods.¹

Physicians who choose to utilize either a two incision or single incision fixation of a distal biceps tendon injury should be familiar with the relevant anatomy, approaches and risks associated with these various techniques. This technique guide serves as a review and not as generalized instructions to perform a distal biceps tendon reconstruction. Surgeons should rely on their training, knowledge of anatomy and experience to dictate the desired treatment options available for given patients and injuries.



Step 1: Exposure

An anterior approach to the forearm is utilized using either a longitudinal or transverse skin incision just distal to the antecubital fossa. Care is taken to avoid the lateral antebrachial cutaneous and superficial radial nerves.

The distal biceps tendon is often easily identified with adjacent subcutaneous hematoma. Mobilization of the distal tendon may be necessary if the injury is not immediately acute.



Step 1

Step 2: Locate & Attach Tendon to G-Lok



Step 2.



With the distal stump of the biceps tendon having been identified, a #2 (or #5) Force Fiber suture is placed in a Krackow fashion. The initial suture is placed at the proximal end of the biceps tendon and extending toward the distal and torn region. The free suture is then passed from distal to proximal up the biceps tendon stump. The proximal ends of the Force fiber suture are then tied. Using the sizing guide, the distal biceps tendon stump is measured for use in later selection of a cannulated reamer.

Step 3: Tunnel Creation

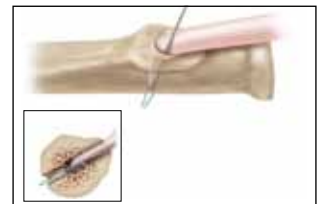
- The radial tuberosity is exposed. Typically, the elbow is held in partial flexion and full supination. Care is taken to avoid retractor placement radially and ulnarly to limit neurovascular injury.
- A short length Stryker 2.4mm Guide Pin is advanced into the radial tuberosity, and advanced into and through the far cortex. Care is taken when this pin penetrates the far subcutaneous tissues and skin. Intraoperative fluoroscopy is utilized to confirm placement of this pin.
- At this point, using the cannulated reamer which corresponds to the size of the distal biceps tendon stump, a unicortical socket is created in the region of the radial tuberosity. Care is taken to ensure the reamer does not pass through the far cortex. If this occurs, later distal fixation can be performed with a G-Lok XL. Additionally, the far cortex of this socket is drilled with the 4.5mm diameter reamer for later passage of the G-Lok.
- Care is taken to remove any and all bony remnants.



Step 3.

Step 4: Graft Passage

- With the arm held in supination and flexion, the suture on the lead end of the G-Lok is passed through the tunnel and through the forearm soft tissues.
 - Alternatively or additionally, the G-Lok rod is utilized to pass the graft through the tunnel and to confirm passage of the button to the far cortex.
- Intraoperative fluoroscopy should be used to confirm placement of the G-Lok on the far cortex of the radius. At this point, the rod is removed. One hand maintains backwards pressure on the rod, while the other turns counterclockwise for two 360° rotations.
- Additional fixation with an interference screw can be considered. Care is taken with choosing the appropriate size of interference screw to avoid fracture of the radial shaft.



Step 4.

Closure is with absorbable suture and a long arm splint is applied. Both early as well as delayed rehabilitation protocols have been advocated.

REFERENCES

1. Chevan PR, et al. Repair of the ruptured distal biceps tendon - A systematic review AMERICAN JOURNAL OF SPORTS MEDICINE Volume: 36 Issue: 8 Pages: 1618-1624 AUG 2008

PART NUMBER	DESCRIPTION
234-100-000	G-LOK NO LOOP
234-100-016	G-LOK XL
234-020-111	GRAFT SIZING BLOCK
234-040-045 4.5mm	VERSITOMIC CANNULATED DRILL
234-040-050 5.0mm	VERSITOMIC CANNULATED DRILL
234-040-055 5.5mm	VERSITOMIC CANNULATED DRILL
234-040-060 6.0mm	VERSITOMIC CANNULATED DRILL
234-040-065 6.5mm	VERSITOMIC CANNULATED DRILL
234-040-070 7.0mm	VERSITOMIC CANNULATED DRILL
234-040-075 7.5mm	VERSITOMIC CANNULATED DRILL
234-040-080 8.0mm	VERSITOMIC CANNULATED DRILL
234-040-085 8.5mm	VERSITOMIC CANNULATED DRILL
234-040-090 9.0mm	VERSITOMIC CANNULATED DRILL
234-040-095 9.5mm	VERSITOMIC CANNULATED DRILL
234-040-100 10.0mm	VERSITOMIC CANNULATED DRILL
234-040-105 10.5mm	VERSITOMIC CANNULATED DRILL
234-040-110 11.0mm	VERSITOMIC CANNULATED DRILL
234-040-115 11.5mm	VERSITOMIC CANNULATED DRILL
234-040-120 12.0mm	VERSITOMIC CANNULATED DRILL

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Literature Number: LBR-JP Rev.1
MS/GS 01/12

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325 Corporate Drive
Mahwah, NJ 07430
t: 201 831 5000

www.stryker.com