KEY PROCEDURES

ARTHROSCOPIC ANTERIOR TALOFIBULAR LIGAMENT REPAIR WITH USE OF A 2-PORTAL TECHNIQUE

Yoshiharu Shimozono, MD, Alexander Hoberman, MD, John G. Kennedy, MD, MCh, MMSc, FFSEM, FRCS(Orth), Masato Takao, MD, PhD

Published outcomes of this procedure can be found at: *Knee Surg Sports Traumatol Arthrosc.* 2016 Apr;24(4):1003-6, and *Arch Orthop Trauma Surg.* 2016 Jan;136(1):93-100.

Investigation performed at NYU Langone Health, New York, NY; and Clinical and Research Institute for Foot and Ankle Surgery, Jujo Hospital, Chiba, Japan

COPYRIGHT © 2019 BY THE JOURNAL OF BONE AND JOINT SURGERY, INCORPORATED

Click the arrow above or go to surgicaltechniques.jbjs.org to view the video article described in this summary.

Abstract

Ankle sprains are common musculoskeletal injuries, with approximately 27,000 occurring every day in the U.S. alone. The anterior talofibular ligament (ATFL) is the most commonly injured ligament. Although most acute lateral ankle sprains can be treated conservatively, up to 20% of these injuries result in chronic lateral ankle instability and may require surgical stabilization. Recently, an arthroscopic lateral ankle ligament repair technique has become increasingly popular. This minimally invasive procedure is expected to reduce postoperative pain and promote faster recovery. The current article presents an ATFL repair using a 2-portal, non-distraction arthroscopic technique. Chronic lateral ankle instability refractory to physical therapy for 3 to 6 months is the main indication for surgical treatment, and sufficient quality of ligament tissue remnant is required for arthroscopic repair. Compared with an open procedure, equivalent clinical results and earlier recovery following arthroscopic ATFL repair have been reported. The major steps of the procedure, demonstrated in this video article, are (1) placement of portals for the arthroscopic procedure, (2) suture anchor insertion into the distal aspect of the fibula, (3) needle insertion into the ATFL remnant, (4) a lasso-loop stitch using a suture relay technique, (5) reattachment of the ATFL remnant, and (6) postoperative protocol. Complications are rare, and earlier return to daily activities compared with a standard open technique can be achieved.

Acknowledgment

NOTE: The images at 0:23 in Video 5 and at 0:04 in Video 10 are reproduced from: Matsui K, Takao M, Miyamoto W, Matsushita T. Early recovery after arthroscopic repair compared to open repair of the anterior talofibular ligament for lateral instability of the ankle. *Arch Orthop Trauma Surg.* 2016 Jan;136(1):93-100. Copyright 2015, with permission from Springer Nature.

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/JBJS/ST/A283>).

Yoshiharu Shimozono, MD¹

Alexander Hoberman, MD¹

John G. Kennedy, MD, MCh, MMSc, FFSEM, FRCS(Orth)¹

Masato Takao, MD, PhD²

¹NYU Langone Health, New York, NY

²Clinical and Research Institute for Foot and Ankle Surgery, Jujo Hospital, Chiba, Japan

Email address for J.G. Kennedy: John.Kennedy@nyulangone.org

ORCID iD for Y. Shimozono: [0000-0003-1422-530X](https://orcid.org/0000-0003-1422-530X)

ORCID iD for A. Hoberman: [0000-0002-3923-8134](https://orcid.org/0000-0002-3923-8134)

ORCID iD for J.G. Kennedy: [0000-0002-7258-6528](https://orcid.org/0000-0002-7258-6528)

ORCID iD for M. Takao: [0000-0003-1186-7745](https://orcid.org/0000-0003-1186-7745)

References

1. Takao M, Matsui K, Stone JW, Glazebrook MA, Kennedy JG, Guillo S, Calder JD, Karlsson J; Ankle Instability Group. Arthroscopic anterior talofibular ligament repair for lateral instability of the ankle. *Knee Surg Sports Traumatol Arthrosc*. 2016 Apr;24(4):1003-6. Epub 2015 May 16.
2. Matsui K, Takao M, Miyamoto W, Matsushita T. Early recovery after arthroscopic repair compared to open repair of the anterior talofibular ligament for lateral instability of the ankle. *Arch Orthop Trauma Surg*. 2016 Jan;136(1):93-100. Epub 2015 Oct 14.