New Lateral Ligament Reconstruction Approach

Arthroscopic-assisted surgery subjectively and objectively improved outcomes, researcher reports.

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NATIONAL HARBOR, MD. — Not only is arthroscopically assisted lateral ligament reconstruction possible, but the technique subjectively and objectively improved outcomes for these patients.

Dr. Peter G. Mangone, who developed the technique, presented outcome data for the first eight patients to undergo the treatment.

Three patients reported slight instability. However, all reported significant improvement, compared with preoperative symptoms, according to Dr. Mangone. No patients had any functional limitation or required bracing at an average of 8 months' follow-up.

Seven of the eight patients were negative on the anterior drawer test after the procedure; five of eight patients had a negative talar tilt test. One patient developed an unrelated neurologic process, causing weakness in the peroneal muscles. In terms of function, all patients returned to daily activities without the need for bracing. There were no significant nerve or wound complications in this series.

Although the preferred method for lateral ankle ligament reconstruction has been the Brostrom-Gould technique, which achieves ligament repair/shortening with advancement of the inferior extensor retinaculum, there is increasing evidence that arthroscopic examination at the same time may be beneficial. This prompted Dr. Mangone, an orthopedic surgeon in Asheville, N.C., to consider whether arthroscopic ligament reconstruction would be possible. He was already using an ankle scope and could easily see the ligament/capsule and the anterior talofibular ligament.

The patients in this series underwent arthroscopic lateral ankle ligament reconstruction in 2007-2008. All of the patients were positive for ankle instability on manual examination (anterior drawer test and talar tilt test) and had failed nonoperative management. No calcaneofibular ligament repair was performed.

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The technique involves a popliteal block plus either general or monitored anesthesia care. A noninvasive distractor is placed and arthroscopic examination and debridement are performed with two normal portals. The lateral gutter is debrided more extensively in order to visualize the anterior distal fibula, the lateral capsular structures/anterior talofibular ligament, and the anterior fibula. A 30-degree scope works well.

A bone anchor is placed through the arthroscopic portal and suture exiting the portal. Although one bone anchor is sufficient, Dr. Mangone now places two. The first is placed distal to the anterior inferior fibula, through the inferior extensor retinaculum and capsule. The second anchor is placed slightly superior on the anterior fibula, through the anterior talofibular ligament/capsule and inferior extensor retinaculum. A sharp-tipped suture passer is used with the outside-in technique. However, the inside-out technique can be used as well. The noninvasive distractor is removed. The ankle is held neutral with respect to dorsiflexion/plantarflexion with a slight eversion. The sutures are pulled through a small incision and tied.

A splint is used in the immediate postoperative period. A short leg cast is used for 4-6 weeks. A lace-up ankle gauntlet brace is used for the next 6-12 weeks. ■

Disclosures: *Dr. Mangone is consultant and speaker for Arthrex Inc., which makes orthopedic surgical equipment.*