

4-OPR

Collateral lateral ligament repair: Anatomic ligaments reinsertion with augmentation using an extensor retinaculum flap

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Introduction

The surgical technique reported, combines re-tensioning of the incompetent lateral collateral ligament (ATFL and CFL) with reinforcement by a flap harvested from the extensor retinaculum and working as a new lateral ligament.

Surgical technique description

Among the different steps presented during the live surgery, some key-points must be highlighted.

- Development of a periosteal flap in order to reinforce the capsular shift at the end stage of the procedure.
- Checking of the residual ATFL and CFL to confirm their ability of reinsertion.
- Anchor fixation at the anterior part of the fibular malleolus: one for the capsule and ATFL-superior and one for the conjoint insertion of ATFL-inferior and CFL (but one needle per ligament).
- Elevation and preparation of the superior bundle of the distal extensor retinaculum in order to create a 1cm by 4 cm flap (ERF).
- Reinsertion of the ERF into a tunnel drilled into the lateral malleolus in between the two anchors and fixed by an interference screw.
- The sutures and the ERF are tied the ankle in neutral position
- The periosteal flap repositioned and further sutures closing the sinus tarsi entry, reinforce the reconstruction.

Why to use this procedure?

1. Because this technique consists on an anatomical repair, as the Brostrom procedure, by repairing ATFL and CFL, on request.
2. To avoid recurrent laxity at midterm follow up by performing an augmentation.
3. To avoid the use of the peroneus brevis entirely, muscle evolver, so essential to recover the proprioception after surgery.
4. To use of the extensor retinaculum as the world wide consensual structure to reinforce the CLL but in a better way than Gould, creating a bulky, vascularized new ligament, stabilizing both ankle and subtalar joints.
5. Because the effectiveness of such procedure was well-established in the literature at long term follow-up (medium 11 years).

Conclusions

This open technique to repair the CLL, using an extensor retinaculum flap as an augmentation, seems the best option when the remnant ligaments (ATFL, CFL) are suitable for re-insertion. Arthroscopic or minimal invasive developments must be considered in a very next future.