

4-MBT4

Arthroscopic repair with augmentation for lateral instability of the ankle : All inside ATFL repair through two portals

○ Jorge Pablo Batista

Arthroscopy CAJB SA , AAA, ESSKA, ISAKOS, Argentina

Several surgical techniques have been described in order to treat chronic lateral ankle instability.

Arthroscopy is an alternative in these patients, but it is traditionally known that this procedure is used with diagnostic purposes or treatment of associated intraarticular pathology in the majority of patients. The aim of this technique is to repair the anterior talofibular ligament (ATFL) under direct arthroscopic visualization through two portals only.

Distraction of the ankle was not used routinely. A 4-mm 30 ° arthroscope is introduced through anteromedial portal medial to the anterior tibial tendon. The ankle is positioned in maximum dorsiflexion to obtain the optimal view of the lateral gutter. Anterolateral portal is made by transillumination taking care not to damage the superficial peroneal nerve.

Prior to reattach the ligament, associated intraarticular pathology is treated and it should be defined if the anterior talofibular ligament present a partial or complete rupture and if the calcaneofibular ligament is broken.

The footprint for the fibular attachment of the ATFL is debrided with a shaver or a curette and a hole is performed on the fibula with a drill directed from anterior to posterior and parallel to the plantar plane. A suture passer with a 2:0 or 0 nonabsorbable suture is introduced through the anterolateral portal, and under direct arthroscopic visualization, the remanent ATFL is penetrated from lateral to medial.

Pull back the suture to know if there is a good capture of the remanent tissue. The limbs of the suture are passed through the knotless anchor. The tension of the suture can be modulated before introducing the anchor. Once the anchor is introduced, the tension of the suture can not be controlled. The last step is to introduce the anchor by impactation and the reparation should be visualized and verified with an arthroscopic probe hook. A compressive bandage and a walking boot keeping the ankle in 90 degrees is indicated in all patients and maintained for 4 weeks. Crutches are used during the first week with partial weight bearing, after this time they are allowed to deambulate with a walking boot.

4-MBT5

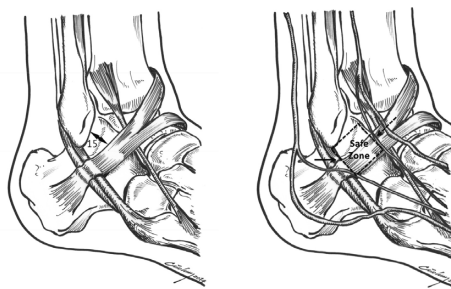
Arthroscopic repair with augmentation for lateral instability of the ankle The "Inside-out" ArthroBroström

○ Caio Augusto de Nery

Orthopedic and Traumatology - Foot and Ankle Clinic, UNFESP - Federal University of São Paulo, Brazil

Caio Nery, M.D.
Marcelo Prado, M.D.
Fernando C. Raduan, M.D.

- Supine position / no ankle traction / exsanguination of the leg.
- Ankle anatomic landmarks are identified to determine "the safe zone": (1) anterior margin of the fibular malleolus; (2) distal fibular tip; (3) the superior margin of the peroneal tendons and (4) intermediate branch of the superficial peroneal nerve.
- A line 1.5 cm inferior to the anterior margin of the fibular malleolus and distal fibular tip is drawn and represents the proximal border of the Inferior Extensor Retinaculum (IER).
- Portals: both the classic AM and AL
- Arthroscope: 2.7 mm / 30 degrees
- Ankle joint inventory and treatment of all coexisting lesions prior to the ligament repair.



At risk structures of the lateral ankle and the Inferior Extensor Retinaculum
Safe zones: Intermuscular (Saphenous x Superficial Peroneal Nerve) = 51mm
Intertendinous (peroneus tertius x peroneus brevis) = 43 mm

- Lateral gutter and anterior face of the fibular malleolus debridement.
- Through the lateral portal, a double loaded 5.0 mm cork-screw anchor is introduced at the ATFL foot print at the lateral malleolus.
- With a curved suture passer all the suture limbs are passed at least at 5 mm apart from each other through the ankle articular capsule, ligaments remnants, IER and skin respecting the "safe zone".
- With the help of a small arthroscopic probe one of the limbs of each sutures are passed through the subcutaneous tissue to pair with the other limb.
- With the ankle in neutral position, arthroscopic Duncan's slip knots are tied in both pair of sutures.

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