

4-MBT8

Arthroscopic anatomical reconstruction of the lateral ligament of the ankle(A-AntiRoLL)

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AntiRoLL is the word made by Dr. Glazebrook, aligning underlined parts of the phrase "Anatomical Reconstruction of the Lateral Ligament of the ankle". There are 3 types of AntiRoLL, arthroscopic (A-AntiRoLL), percutaneous (P-AntiRoLL) and open AntiRoLL.

The position is supine, and the lower leg is held with a leg holder. The tourniquet is not normally used, but it should be worn on the thigh for use when the field of vision is hindered by bleeding.

There are 4 steps for Antiroll: step 1 as make a Y-shaped graft, step 2 as make the portals, step 3 as make the bone tunnels at each attachment to fibula, talus and calcaneus, step 4 as introduce a Y-shaped graft into the bone tunnels and fix with the interference screw.

Step 1: Make Portals

Medial midline (MML) portal, accessory anterolateral (AAL) portal, and subtalar portal (ST) are used.

Step 2: Make a Y-shaped graft

An autologous gracilis tendon is harvested from ipsilateral knee. The short leg of the Y-shaped tendon graft is ATFL and the long leg is CFL.

Step 3: Make the bone tunnels at each attachment to fibula, talus and calcaneus

In making a fibular bone tunnel, a viewing portal is MML and a working portal is ST. In making a talar bone tunnel, a viewing portal is MML and a working portal is AAL. In making a calcaneal bone tunnel, a viewing portal is ST and a working portal is AAL.

Step 4: Introduce a Y-shaped graft into the bone tunnels and fix with the interference screw

A Y-shaped graft is introduced and fixed into the bone tunnels with interference screws firstly fibula, next talus, and finally calcaneus. It is important to insert a guide wire for interference screw before introducing a graft into the bone tunnels to prevent to penetrate the graft by a guide wire following graft damage by an interference screw.

4-MBT9

Minimally Invasive and Anatomic Ankle Reconstruction of Lateral Ligaments (AntiRoLL): A new technique done Arthroscopic, Percutaneous or Open

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Surgical options for patients with recurrent lateral ankle instability who have failed nonoperative management include traditional open Brostrom repair with or without the Gould modification or reconstructive surgery in which the lateral ligaments are replaced with autograft or allograft when preexisting ligaments are inadequate for repair. Reconstructions have historically been performed in a non-anatomic fashion often with resulting over constraint of the ankle and/or subtalar joints with subsequent functional deterioration and the development of degenerative changes over time. Further, these surgical reconstructions have not been done using minimally invasive surgery and as such optimal early recovery from surgery may be compromised. It is anticipated that performance of a reconstruction in a minimally invasive and more anatomic manner may provide patients with improved clinical outcomes and optimal recovery.

The new surgical technique proposed is an Ankle Reconstruction of the Lateral Ligaments (AntiRoLL) which may be performed open through a standard surgical exposure, using arthroscopic or percutaneously techniques. Percutaneous AntiRoLL (P-AntiRoLL) may be indicated in the absence of intraarticular pathology that requires concurrent arthroscopic surgical treatment. Arthroscopy can be performed prior to the percutaneous procedure when indicated for treatment of intra-articular comorbid lesions including osteochondral lesions and/or anterior ankle impingement noted pre-operative assessment. There are 5 steps for P-Antiroll:

1. Anti-RoLL Y-Graft Construction
2. Fibula Bone Tunnel (ATFL-CFL)
3. Talar Bone Tunnel (ATFL)
4. Calcaneal Bone Tunnel (CFL)
5. Anti-Roll Y-Graft Delivery & Fixation