



# Calcaneal Bone Graft Harvesting and Backfill Plugs

Authors: Greg Berlet, MD, FRCS(c), FAOA, Bryon J. McKenna, DPM, AACFAS, Calvin J. Rushing, DPM, AACFAS

## PRESENTATION

A 45-year-old male laborer with disabling ankle pain was referred to the Orthopedic Foot and Ankle Center for evaluation. The patient presented with complaints of sharp, stabbing ankle pain while walking and throbbing at rest. Relevant clinical history of multiple lateral ankle sprains (>12), beginning in high school, and a non-displaced ankle fracture 18 years prior was present; all were treated non-operatively. Pain and swelling had steadily increased in severity over the last five years until reaching the point of severe disability at work while loading and unloading trailers. When not at work, the patient used an ambulation aid.

## EXAMINATION

Physical examination revealed diffuse swelling to the anterior and lateral aspects of the left ankle with a significant effusion. Tenderness was exacerbated during dorsiflexion of the ankle, and equinus was noted. The ankle's resting position was correctable valgus, and the patient had a supple subtalar joint. An asymptomatic bone prominence over the 1st TMT was the only deformity observed. The strength of all muscle groups of the foot and ankle was five of five. The vascular exam was within normal limits, although sensory paresthesias were

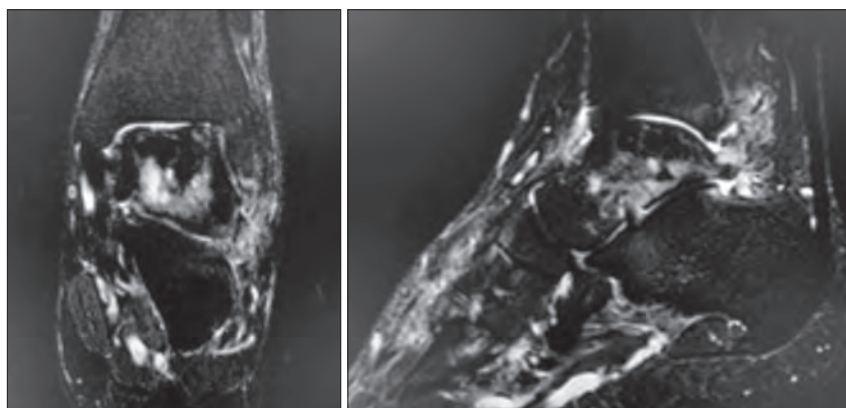


Figure 2A-B. Magnetic resonance imaging (MRI) demonstrating diffuse edema throughout the talus.

noted; radiations were most severe in the distribution of the posterior tibial nerve.

Conventional radiographs revealed a neutral to slight varus alignment of the ankle (Figures 1A & B).

Post-traumatic ankle arthritis with anterior spurring off the tibia was also noted.

An MRI study was ordered, and an ASO brace was applied to the left lower extremity. The patient was prescribed oral anti-inflammatories and was instructed to return post-MRI.

Upon MRI review, diffuse edema throughout the talus, chronic grade III lateral ligament tears, and severe tibiotalar arthritis were identified (Figures 2A & B). Treatment options were discussed, and the decision was

made to proceed with a left arthroscopic ankle arthrodesis, calcaneal graft harvest, and gastrocnemius recession.



CoLink Bone Graft Harvester

Two outer tube diameters: 6mm and 8mm.

## INDICATIONS FOR USE:

The CoLink Bone Graft Harvester is a single-use, pre-assembled bone graft harvesting device that allows graft harvesting from various sites. The CoLink Bone Graft Harvester is utilized to morselize cancellous bone to augment bone healing. Sterile Tribio™ Backfill plugs, consisting of hydroxyapatite, tri-calcium phosphate, and bioactive glass in a bioabsorbable collagen matrix, are available to backfill the harvest site.

## SURGICAL TECHNIQUE

A 1cm incision is performed over the posterior lateral aspect of the posterior tuber of the calcaneus, taking care to avoid the sural nerve, with blunt dissection carried down to the periosteum. The harvester is then



Figure 1A-B. Conventional radiographs demonstrating post-traumatic ankle arthritis.