2:35 – 2:40 pm
Yes, Through a Large Incision
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Open Ankle Arthrodesis with a Fibular-Sparing Technique

Many operative approaches can be utilized for ankle arthrodesis. Less invasive methods include arthroscopic ankle fusion \(^1\)–\(^4\) and the mini-open arthrodesis. \(^5\)–\(^7\) Minimally invasive techniques can have shortcomings, including being technically challenging with a steep learning curve and having limited utility if significant deformity or bone defects exist. \(^8\)

Open ankle arthrodesis can be accomplished by a number of techniques. \(^9\) In the popular lateral trans-fibular approach described by Mann et al in 1991, the fibula is removed and used for bone graft or as a bone strut. \(^10\) There are disadvantages to removing the fibula. The intact fibula blocks valgus drift in cases of delayed union, provides additional surface area for fusion, and may serve as a guide to proper rotation and positioning of the talus within the mortise. Furthermore, preservation of the fibula maintains the native groove and restraints for the peroneal tendons and enables conversion to total ankle replacement.

In this presentation, an open fibular-sparing ankle arthrodesis technique is described. This technique is a modification of Mann’s lateral trans-fibular approach. Autogenous fibular graft is harvested through a fibular window. We believe that this technique can be widely used for patients without a large pre-existing deformity and that it is a simple technique that allows excellent visualization without fibular osteotomy or resection.

For technique description, see:
Smith, JT; Chiodo, CP; Singh, SK; Wilson, MG: Open ankle arthrodesis with a fibular sparing technique. Foot ankle Int. 34:557-62, 2013.

We retrospectively reviewed fifty consecutive ankle arthrodeses using this technique and reported a 93% fusion rate with union achieved at an average of 12 weeks postoperatively. At 28 months postoperative, 86% of patients reportedly being ‘completely satisfied’ with the outcome. Average AOFAS Ankle-Hindfoot Scale was 84 ± 12 and average Foot Function Index pain subscale was 1 ± 0.9.

Additional Reading:

7. Paremain, GD; Miller, SD; Myerson, MS: Ankle arthrodesis: results after the miniarthrotomy technique. Foot Ankle Int. 17:247-252, 1996.