Technique and Early Results of Simultaneous Sesamoidectomy and First MTP Arthrodesis

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• My disclosure is in the Final AOFAS Mobile App.

• I have no potential conflicts with this presentation.
Introduction

- 1st (MTP) joint arthrodesis is a successful procedure to treat end-stage first-MTP hallux rigidus.[1-6]

- However, A rarely reported complication is symptomatic metatarso-sesamoid osteoarthritis
  - This will result in a persistently painful great toe despite successful MTP fusion. [4]
Introduction

• Sesamoid resection following a successful 1st MTP arthrodesis
  – Requires additional plantar medial and plantar lateral incisions
    • Additional morbidity with associated risks to the plantar digital nerves

• In contrast to isolated tibial and fibular sesamoid resection, the risk of a cock-up toe cannot occur with a successful 1st MTP fusion.
6 cases with clinical and radiographic evidence of hallux rigidus and metatarso-sesamoid arthritis.

Indications

(1) 1st MTP joint pain at the dorsal and plantar aspects.

(2) Tenderness to palpation over the dorsal aspect of the 1st MTP and with axial grind test must be identified.

(3) Dorsally directed pressure against each sesamoid should elicit pain.

(4) Radiographic evidence of metatarso-sesamoid arthritis
   - Confirmed with CT scan
Surgical Technique - 1

- Standard Dorsomedial Incision centered of the 1st MTP

- Following completion of the joint preparation a lamina spreader is placed between the metatarsal head and phalanx

Lamina Spreader improves visualization

Plantarflexion of the phalanx may enhance visualization
Excision can be performed without repair of the FHB
- 1st Arthrodesis mitigates need for repair

Sharp excision with a knife and osteotome facilitates excision

FHL is visualized and protected

Excision of Tibial Sesamoid

Standard 1st MTP fixation
Results – min 6 mos F/U

• **Pain**
  – Preop 8.6/10
  – Postop 0/10

• **Function**
  – All were able to walk pain free with and without shoe wear
  – No limitation on walking distance due to pain.
  – Plantar 1\textsuperscript{st} MTP pain resolved

• **Complications**
  – No wound complications, injuries to the flexor hallucis longus, nor injuries to the plantar digital nerves were noted.
Summary

• Concomitant 1st MTP arthrodesis and sesamoid resection is an appropriate procedure for select candidates
  – Indications
    • MTP DJD and Metatarso-sesamoid DJD
  – Does not require alteration in the surgical approach
  – No increase in morbidity noted in this small series
  – Excellent clinical and radiographic outcomes should be expected.
  – Further long-term research is required to determine the efficacy of this procedure
References


2- Kumar S, Pradhan R, Rosenfeld PF.  First metatarsophalangeal arthrodesis using a dorsal plate and a compression screw.  Foot Ankle Int. 2010 Sep;31(9):797-801.


