Acute Tears of the Posterior Tibialis Tendon Following Common Ankle Sprain

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My disclosure is in the Final AOFAS Mobile App.
I have no potential conflicts with this presentation.
• Ankle sprains are the most common extremity injury

• Acute tears of the posterior tibialis tendon are considered rare.

• Literature regarding these acute tears is limited to case reports

• Outcomes unknown

• Described as tears at the insertion for young patients and mid substance for middle aged and mature patients

• Often associated with injury to the deltoid and medial instability
Patient inclusion in this study:

- Mostly on clinical suspicion with careful physical exam and review of injury mechanism
- Pain over the posterior tibialis tendon lasting greater than 4 months
- Able to do a single leg toe raise, but with pain
- May have unilateral planovalgus
- +/- X-Ray/MRI findings
Surgical Treatment

- Evaluate post tib and repair as needed usually with a baseball type stitch or partial excision
- Correct any lateral hindfoot valgus with a medial displacement osteotomy and deltoid reconstruction
- Address other problems
  - Scope for intra-articular pathology
  - Ligament reconstruction
  - Peroneal tendon debridement/repair
Rehabilitation

• NWB x 2 weeks

• Walker boot x 4 weeks

• WBAT

• Begin ROM

• Wean walker boot after 6 weeks

• Continue PT

• WBAT

• Wean out as able
Results

• 14 patients with traumatic tears of posterior tibialis

• 5 right, 9 left; 5 men, 9 women

• Average age 35.4 (20-54)

• Average time from injury to surgery 7.2 months (3-15)

• 7/14 some planovalgus deformity
Imaging

**Radiograph**
- Medial “fleck” sign

**MRI**
- Radiology interpretation
  - 4/13 fluid or tear
- Surgeon interpretation
  - 11/12 fluid or tear
Intraoperative Findings/Treatment

• 14/14 had a longitudinal split of the posterior tibialis tendon

• No avulsions off the navicular or midsubstance tears

• Arthroscopic bone marrow stimulation OCD (14/14)

• Lateral ligament reconstruction (11/14)

• Superficial deltoid reconstruction (8/14)

• Calcaneal osteotomy (3/14)
• Nine patients available for follow-up
• 3/14 patient with persistent pain resulting in FDL transfer (21%)
• Six patients for clinical evaluation
• Average follow-up
  • 33.7 months (12-54)
• Foot function index 70.6 (30-105)
• Pain 37.5 (15-105)
• Disability 23.1 (10-46)
• Activity 10.0 (5-18)
• AOFAS hindfoot score 69.0 (28-
  95)
• Heel inversion on toe raise
  • 6/6
• Single leg toe raise
  • 6/6
• Posterior tibialis tenderness
  • Moderate 1/6
Conclusion

• High index of suspicion

• Associated with a significant ankle sprain with other injury/pathology surrounding the ankle

• Radiology reads are oftentimes normal

• Personal evaluation of MRI may give some subtle signs such as fluid

• Outcomes may be poor despite early recognition and treatment