

Foot and Ankle Pain: Six Common Problems



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Foot and Ankle Topics

- ✦ Common problems
- ✦ How to assess
- ✦ How to diagnose
- ✦ Nonoperative treatment
- ✦ When to refer



Agony of da Feet

- ✦ 1,000,000 steps per year
- ✦ Tons of weight applied to foot and ankle complex with running/jumping activities



Foot and Ankle Pathology: Six Common Foot and Ankle Problems.

- ✦ Stress Fractures
- ✦ Posterior tibial tendon dysfunction
- ✦ Insertional Achilles tendonitis
- ✦ Plantar fasciitis
- ✦ Hallux Rigidus
- ✦ Morton's Neuroma



History

- ✦ Where does it hurt?
- ✦ Describe the pain
- ✦ When does it hurt?
- ✦ What activities make it worse?
- ✦ What makes it better?



Physical Assessment

- ✦ Remove shoes and socks
- ✦ Foot and ankle structures are palpable due to scant soft tissue coverage



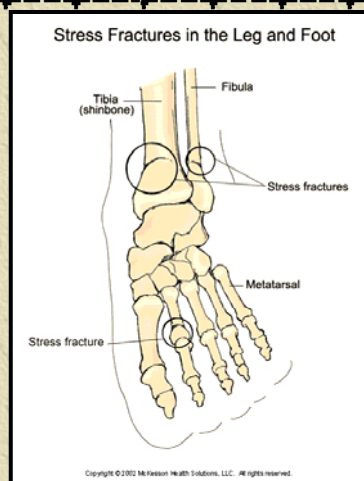
Stress Fractures: Pathomechanics

- ✦ Microfracture results from cumulative stress on the bone
- ✦ 2nd MT, navicular, calcaneus
- ✦ Associated with osteopenia or onset of new activity



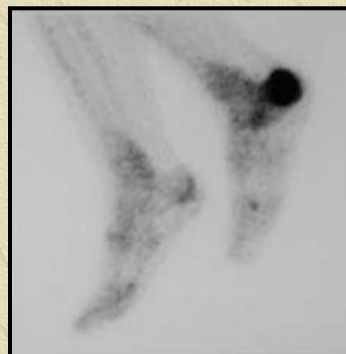
Stress Fractures: Assessment

- ✦ Localized pain and swelling over a single bone
- ✦ Radiographs are commonly negative or may demonstrate periosteal reaction



Stress Fracture: Imaging

- ✦ Third phase of bone scan may confirm injury when x-rays are negative and strong clinical suspicion



Stress Fractures: Treatment

- ✦ Cast or boot, possibly crutches
- ✦ Athletes may require more aggressive treatment
- ✦ Refer the athlete or if no improvement with 4 weeks of immobilization



Hindfoot Pain: Posterior Tibial Tendon Dysfunction

Assessment:

- ✦ Progressive flatfoot deformity with pain and swelling about the posterior tibial tendon
- ✦ Middle-aged women
- ✦ “Too many toes” sign
- ✦ Midfoot breakdown



Posterior Tendon Dysfunction: Assessment

- ✦ Deformity may become rigid over time
- ✦ The PTT largely controls the talonavicular joint



Posterior Tibial Tendon: Imaging

- ✦ Radiographs demonstrate breakdown of the TN joint on the AP and lateral views
- ✦ MRI demonstrates variable involvement of the PTT



Posterior Tibial Tendon: Treatment

- ✦ Inserts or AFO brace to stabilize the arch and the TN joint
- ✦ NSAIDS
- ✦ Physical therapy modalities



Hindfoot Pain: Insertional Achilles Tendonitis

Examination:

- ✦ Tendon intact
- ✦ Tenderness about the insertional area onto the calcaneus
- ✦ Usually swelling over insertional area
- ✦ A toe raise reproduces the pain



Insertional Achilles Tendonitis

Radiographic Findings

- ✦ Haglund's deformity
- ✦ Spurring/dystrophic calcification within the tendon



Differential Diagnosis:



- * Stress fracture of the calcaneus
- * Painful os trigonum
- * Achilles tendon rupture



Insertional Achilles Tendonitis

* **PUT THE TENDON TO REST....**

* Treatment

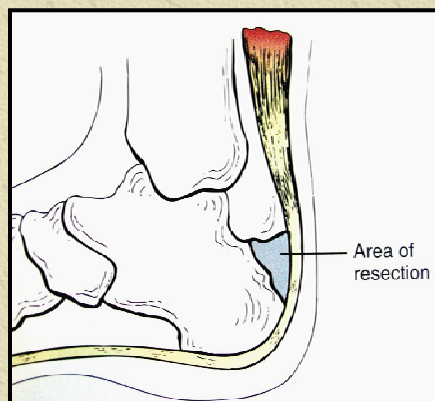
- ◆ Activity modifications, functional walking boot, NSAID, PT modalities

* Refer if no significant improvement with conservative measures after 6 weeks



Insertional Achilles Tendonitis: Surgical Options

- ✦ Removal of Haglund's
- ✦ Debridement of Achilles
- ✦ Reattachment of Achilles tendon
- ✦ Long recuperation



Hindfoot Pain: Plantar Fasciitis:

- ✦ History: Pain prominent in the AM
- ✦ Exam: tenderness over the plantar medial insertion of the plantar fascia
- ✦ No pain with ST motion or tapping over the tarsal tunnel



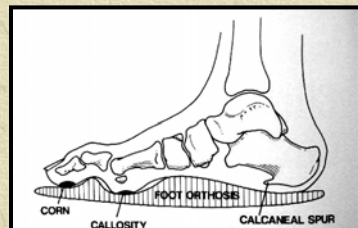
Plantar Fasciitis

- ✦ Often associated with a tight heel cord
- ✦ Natural history—often self limited
- ✦ Pathophysiology—degenerative microtears of the plantar fascia



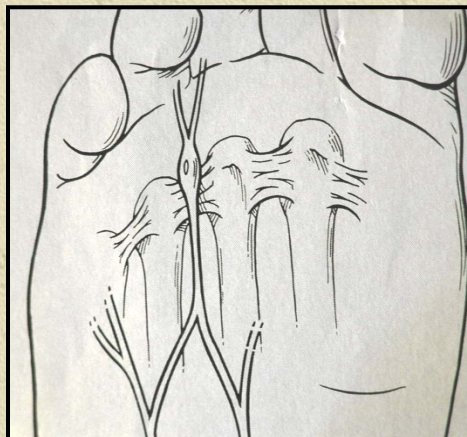
Plantar Fasciitis

- ✦ Treatment
 - Arch supports, stretching, NSAIDS, judicious use of steroid injections
- ✦ Refer for ECSW therapy, casting, surgery



Forefoot Pain: Morton's Neuroma

- ✦ Digital nerve entrapment of 2-3 or 3-4 interspace
- ✦ Neurogenic pain on plantar surface and numbness of one-half of toe
- ✦ Mulder's click
- ✦ Positive forefoot squeeze test



Forefoot Pain: Morton's Neuroma



Differential Diagnosis

- ✦ Metatarsalgia
- ✦ MTP synovitis
- ✦ Stress Fracture

Morton's Neuroma



X-rays are usually normal

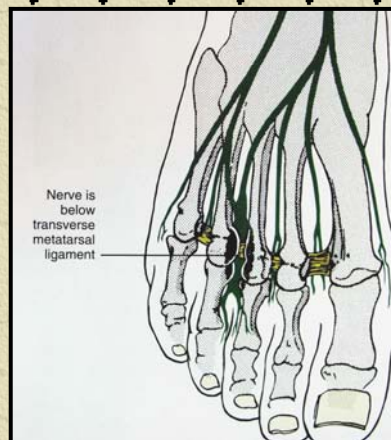
Morton's Neuroma

Schon, JAAOS: Sept 08

- ✦ 2-3 interspace was most common
- ✦ Female > Males
- ✦ Average age: 55
- ✦ Diagnostic lidocaine injection is essential
- ✦ Concurrent neuroma in approx 2-3%

Morton's Neuroma: Assessment

- ✦ Pathoanatomy: nerve entrapment at distal aspect of the transverse MT ligament
- ✦ Rule out more proximal source
- ✦ Uncommon to have concurrent neuroma in adjacent interspace



Morton's Neuroma

- ✦ No characteristic x-rays and MRI/US is usually not necessary
- ✦ I use injection of 2 cc of lidocaine as a diagnostic test
- ✦ Must R/O MTP synovitis/instability and metatarsalgia



Morton's Neuroma: Treatment

✦ Goal

- Decrease nerve swelling and increase the size of the interspace

- ✦ Transverse metatarsal bar, shoe modifications, NSAIDs, steroid injections



Morton's Neuroma: Surgical Treatment

- ✦ Surgery to decompress or excise the sensory nerve



Hallux Rigidus

*Lau, Foot and Ankle
Int. June 2008*

- ✦ Pain at 1st MTP joint
- ✦ Boney enlargement
- ✦ Painful passive MTP dorsiflexion
- ✦ Dorsal prominence



Hallux Rigidus

Differential Diagnosis

- ✦ Gouty attack
- ✦ Sesamoiditis
- ✦ Neuritis
- ✦ Painful bunion



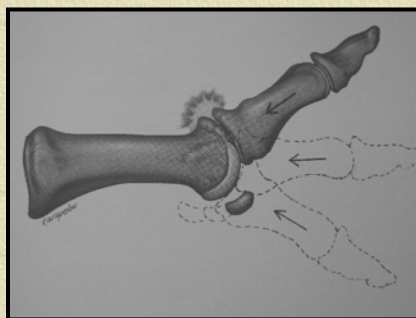
Hallux Rigidus: Treatment

- ✦ Rocker bottom shoes
- ✦ Anti-inflammatories
- ✦ Steel insert in shoe



Hallux Rigidus: Surgical Treatment

- ✦ Cheilectomy
- ✦ MTP fusion



Foot and Ankle Injuries

- ✦ By understanding the pathology present, one has the best chance of correcting it
- ✦ Preventative treatment can circumvent more serious problems later

Thanks for your interest and attention.....

