Foot and Ankle Pain: Six Common Problems

Steven J. Lawrence, MD
Head of UK Orthopedic Foot and Ankle Surgery
May 14th, 2009
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 tendon
- 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.....