Sports Related Fractures of the Foot and Ankle

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No disclosures
Sports Related Fractures of
5th Metatarsal Fractures
of the Foot and Ankle

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Anatomy

Peroneus tertius tendon
Base
Cuboid
Fourth metatarsal
Fifth metatarsal
Peroneus brevis tendon
Tuberosity
Shaft
Plantar fascia

TCOmn.com
Pathophysiology

• Inversion injury
  – Associated ankle sprain

• Most common sports
  – Basketball...etc
Risk Factors

- Cavus/cavovarus foot
- Ankle instability
- Fall risk?
- Picture of peek a boo sign
Proximal Avulsion Fracture

- Proximal tubercle fracture
- Avulsed by lateral band of plantar fascia
- Fracture is proximal to the insertion of the peroneus brevis

- Picture of 5th MT avulsion
Proximal Avulsion Fracture

Treatment

• Usually non-surgical
  – 4 weeks WBAT in a boot

• Indications for surgery
  – Significant displacement
  – Articular extension
  – Painful non-union

• Picture of 5th MT avulsion fixed
The Mimic

• Proximal apophysis of 5th metatarsal
• Can have fracture associated with this
• Iselin’s disease
  – Usually closes by 14
  – Often non-surgical mgmt

• Picture of bug that looks like stick
Jones Fracture

- Described by Sir Robert Jones when he suffered the injury himself
- Metaphyseal-diaphyseal junction fracture
- Why don’t they want to heal?
  - Insertion of P. Brevis
  - Nutrient artery

- Picture Robert Jones
- X-ray of Jones fracture
Jones Fracture

Non-surgical Treatment

- Indications
  - Non-displaced
  - Poor surgical candidate
  - Low demand

- Short leg cast
  - NWB
  - 6 weeks

- Evaluate for associated ankle ligament injury

- X-ray of short leg cast
Jones Fracture

**Surgical Treatment**

- **Indications**
  - Any displacement
  - Cavus foot deformity
  - Athlete/high demand
  - Recurrent fracture
  - Non-union

- **Cavus foot correction**
  - Recurrent fracture
  - Severe deformity

- X-ray of IM fixation of Jones fx
- Picture of Dwyer
Jones Fracture

Surgical Treatment

• Post-op
  – NWB 6 weeks
  – Short leg cast 2 weeks
  – Aircast boot 4-6 weeks
  – ROM after 2 weeks

• Evaluate for associated ankle ligament injury

• Picture of standing on sidelines with crutches
Shaft Fractures

“Dancer’s Fracture”

• Long, oblique fracture
• Twisting injury
• Non-surgical healing can be slow
• Surgical indications
  – Patient preference
  – Non-union
  – Athlete/high demand

• X-ray of dancer’s fracture
Other Shaft Fractures

• More likely to need surgical treatment

• X-ray of comminuted shaft fracture
Stress Fractures

• Appropriate history
• X-ray characteristics
  – Sclerosis
  – Hypertrophic
• Treatment
  – Generally surgical
  – Requires bone grafting
  – Correct foot alignment

• X-ray of stress fracture
Thank You
Bibliography


Bibliography


