The “Non-Healing” Ankle Sprain

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Workplace Foot/Ankle Injuries

(Conti and Silverman, 2002)

- Foot/Ankle Injuries
  - ~10% of Total Injuries
  - Unchanged over past 20 years

- Male:Female = 2:1 Incidence

- More Likely Recuperation Out of Work
  - Mean 5 Days Out of Work
  - Unable to drive/walk/carry/etc.
“Ankle Sprain”

Symptoms

• Pain
• Swelling
• Bruising
• Warmth
• Tender
Treatment-Phase 1

- Boot/Brace
  - Immobilization

- Pain Control
  - Anti Inflammatory

- RICE
  - Rest, Ice, Compression, Elevation
Treatment

Phase 2-Rehab

• Physical Therapy
  – Strength
  – Motion
  – Balance/Proprioception
  – Modalities

➢ 6-12 Weeks Recovery*
Unable to Return

Incorrect Initial Diagnosis?

• 15% Change in Diagnosis during treatment with Non-Orthopedist (Gabriel et al, 1997)
• General Ortho > Foot/Ankle Ortho (Kunkel et al, 2002)

➢ Delayed Treatment

➢ Failed Attempts at Return to Work
  • Conflict between patient and employer
Unable to Return

① Review Injury History

② Focused Exam

③ Advanced Imaging
  – MRI
  – CT scan
Lateral Ankle Anatomy 101

3 Main Ligaments
- ATFL
- CFL
- PTFL

2 Major Tendons
- Peroneus Longus
- Peroneus Previs
Ligament Instability

• History of Multiple Previous Sprains
  – Single High-grade

• “Ankle Rolls Over”

• Report Weakness*
  – NOT Pain
Chronic Ligament Instability

Treatment

• Physical Therapy
• Bracing

Repeat Failure (~10%)

➢ Ligament Repair or Reconstruction
Cartilage Injury

Osteochondral Defect (OCD)
- Cartilage loss
- Loose bodies in Joint

- 25% Prevalence in Unstable Ankle

- Challenge: 50% seen on Xray
Ankle Impingement

Scar Formation

• Joint Capsule
  – Hypertrophic Synovium
  – Inflammatory

• Ligamentous
  – AITFL/Syndesmosis
  – Meniscoid lesion
Scope Recovery Time

- Cartilage/OCD
  - Microfracture
    • Non Weight Bearing ~6 weeks

- Impingement/Loose Body
  - Debridement and Removal
    • Early Rehab at 1-2 weeks
Peroneal Tendons

• 2 Peroneal Tendons
  – Brevis
  – Longus

• Dynamic Ankle Stability
  – Eversion strength
Peroneal Tendon Tears

**Peroneus Brevis**

- Inserts base 5th Metatarsal

- Longitudinal Splits Tears
  - Not Ruptures

**Treatment**

- Boot-PT
- Repair/Reconstruction
Peroneal Instability

Peroneus Longus

- Inserts 1\textsuperscript{st} Metatarsal and Medial Cuneiform

- “Snapping Sensation”

- Dislocation/Subluxation
  - Incompetent Superior Retinaculum
Persistent Lateral Ankle Symptoms

- Ligaments
- Cartilage
- Joint Scarring
- Tendons
Conclusions

• Lateral Ankle Injury does NOT necessarily mean “Sprain”

• Correlate Injury & Mechanism

• Location of Pain
  – Subtle Differences*

• High Degree of Suspicion to avoid Missing Diagnosis at Initial Presentation