3:30 – 3:35 pm
Treatment of Peroneal Tendon Pathology
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Peroneal Pathology

Overview
- Anatomy
- Conservative Treatment
- Surgical Technique
- Revision

Anatomy
- Peroneus Brevis and Longus
  - Main evertors of the hindfoot
  - Dynamically maintain alignment of hindfoot

Anatomy
- Peroneus Brevis
  - Innervation
    - SPN
  - Action
    - Plantarflex 1st ray
    - Evert foot
  - Location
    - Deep and anterior to the longus

Anatomy
- Peroneus Longus
  - Innervation
    - SPN
  - Action
    - Plantarflex 1st ray
    - Evert foot
  - Location
    - Posterior and lateral to the peroneus brevis

Anatomy
- Os Peroneum
  - 8.5% of population
  - Within substance of peroneus longus
  - Can be a source of pain
**Peroneal Tenosynovitis**

- Etiology
  - Hypertrophy of the peroneal tubercle
- Trauma
- Overuse
- Inflammatory arthropathy
- Injury to the Os Peroneum

**History and Physical**

- Pain
  - Posterior lateral hindfoot
  - Worse with activity
    - Cutting activity
- Exam
  - TTP over peroneals
  - Palpable thickening
  - Pain with passive inversion
  - Pain with resisted eversion

**Imaging**

- AP/lat/oblique weightbearing views ankle
- AP/lat/oblique weightbearing views ankle
  - Os peroneum
- Ultrasound
- MRI
- CT

**Conservative Treatment**

- Immobilization
  - Short leg cast vs. boot
    - 3-4 weeks
  - Careful cortisone injection in sheath
    - Risk of rupture
    - Immobilize after injection
    - PRP injections
    - No data to support

**Surgical Treatment**

- Goals
  - Synovecetomy
  - Tendon repair
    - If required
  - Groove deepening
  - Peroneal tubercle excision
    - If prominent
  - Os peroneum excision
  - Imbricate retinaculum

- Orthosis
- Lateral post
- Physical therapy
- NSAIDS
  - Topical
  - PO
- Activity modification
Tendon Repair

Groove Deepening
- Significant reduction in pressure within peroneal groove
  (Tito CJ., Hang Gwun J., Pande BG., Schon LC. Foot Ankle Int. 2005)
- May minimize recurrence

Groove Deepening

Groove Deepening

Groove Deepening

Hypertrophic Peroneal Tubercle
Tubercle Excision

Revision
- Peroneal tenodesis
- FHL transfer to the base of the 5th metatarsal
  - Staged reconstruction w/ Hunter rods
  - Allograft reconstruction

FHL Harvest – Medial Approach

Revision
- FHL transfer to the base of the 5th Metatarsal
  - Recreates dynamic eversion of the peroneals
  - Does not recreate PF of the 1st Ray
    - Lose FHL function
    - Lose one level of strength
Salvage of Chronic Tears of the Peroneals

Operative

- Secondary staged reconstruction:
  - Hunter rod placement
  - FHL Transfer
Staged Reconstruction

- First reported by Wapner in 1994 (AAOS)
  - Long term follow up > 5 years
  - 7 patients

Staged Reconstruction

- Incision from 5th base to tip to distal fibula

Staged Reconstruction

- Expose and free up the peroneal tendons
- Both tendons encased in scar and split
- Excision of remaining portion of peroneus from myotenous junction to distal tendon
- Debridement of area of old sheath

Staged Reconstruction

- Measure Hunter rod and excise remaining peroneus brevis
- Attach distal end of Hunter rod to stump of peroneus brevis

Staged Reconstruction

- Close the sheath and check to be sure the rod glides

Staged Reconstruction

- Patients performed passive range of motion exercises four times a day for 20 minutes for three months
- Protected weight bearing in cast walker
- Return to OR for stage two - transfer of FHL tendon
Staged Reconstruction

- Harvest FHL from midfoot
- Pull FHL tendon into posterior incision

Staged Reconstruction

- Open proximal lateral incision
- Identify Hunter rod
- Pull FHL through into lateral incision
- Open distal incision and release Hunter rod
- Pull FHL through new sheath

Staged Reconstruction

- Anastomose the FHL to the stump of the peroneus brevis

Staged Reconstruction

- Post op FWB X 3 weeks
- Start active ROM at 3 weeks
- Start FWB and strengthening at 6 weeks
- Air cast at 8 weeks

Results

- 8/7 symmetric full ROM bilaterally
- 4 had 5/5 motor (symmetric)
- 2 had 4+/5 motor
- 1 had 3/5 motor
- 8/7 sustain single heel rise

Results

- 4 excellent
- 2 good
- 1 poor
- All said they would repeat the procedure