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Peroneal Tendon Disorders
Peroneal Tendon Disorders

- Tenosynovitis
- Tears
- Snapping Peroneal Tendons
Cause of injury

- Occur during acute ankle sprain
- Can occur as well by attrition over time.
- Multiple ankle sprains/recurrent instability
Lateral Ankle Sprain

- “Complete Rupture of the ATFL Ligament”

- Treated Non-operatively
ACL Rupture/ Rotator Cuff Tear

- “Complete Rupture of the ACL ligament”
- “Full Thickness tear of the Rotator Cuff”
- Usually require surgery
Lateral Ankle Sprains

- Treat the complete ATFL rupture NON-operatively
- Similar outcomes to surgical treatment with LESS RISK.
- Can Always do surgery later on.
Causes of Pain after Lateral Ankle Sprain- NOT ATFL

- Talar dome lesions
- Intra-articular scar tissue, impingement
- Peroneal tendon tears
- Peroneal tendon dislocations
- Missed achilles
- Missed Syndesmosis
- Missed Lis Franc
Anatomy Peroneal Tendons

- Acute Angle around fibula
- Eversion/Flexion
- SPR - prevents subluxation
- IPR - holds in place
- Tenosynovium
- Common sheath
Anatomy Peroneal Tendons

- SPR - prevents subluxation
- Common sheath
- Splits at peroneal tubercle
- Area of constriction
Anatomy Peroneus Longus

- Courses around cuboid
- Inserts into base of 1st metatarsal
- Plantarflexes first ray
- Everts ankle
Anatomy Peroneus Longus

- MRI showing course of peroneus longus
- Unique to Longus is Os Peroneum
- Sesamoid bone within tendon - 10%
- Site of rupture/tears/pain
Anatomy

[Diagram of foot bones and tendons]

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Shoulder, Foot & Ankle Surgery
Peroneus Brevis Anatomy

- Inserts into the 5th metatarsal base
- More anterior
- Location of tears distal end of fibula
- Tendinosis can occur at peroneal tubercle
Peroneus Brevis Tears

• Longitudinal Tears
• NOT transverse tears
• Still can function normally
• Cause pain, weakness and dysfunction
Peroneus Brevis Etiology

- Brevis is anterior to longus
- "Sandwiched" between longus and fibula
- Worse when ankle 15-25 degrees PF
- Causes attritional longitudinal tears
History of Peroneal Tendon Pathology

- Recent ankle sprain or injury
- Often NO recall of specific episode
- Chronic discomfort lateral ankle
Physical Examination

- Pain along course of peroneal tendons
- Presence of swelling-effusion or synovitis
- Pain with passive inversion
- Pain with eversion against resistance
Investigations

- X-ray
  - Rule out fractures
  - Os peroneum
  - Alignment, cavovarus
- CT NOT helpful
  - Soft tissue problem
Investigations- Ultrasound

- Dynamic test
- Can demonstrate subluxation of tendons around fibula
- Technician dependent
- Accurate of looking for tears

**Fig. 10** Injury to the peroneal tendons. US coronal oblique scan shows partial-thickness longitudinal fissure of the peroneus brevis tendon (*curved arrow*) associated with reactive synovial thickening of the tendon sheath (*arrowheads*). 1 peroneus longus tendon, Calc calcaneus. 1 TPL (peroneus longus tendon); 2 TPB (peroneus brevis tendon), *arrowheads* associated tenosynovitis, Calc calcaneus
Great detail
Evaluates entire ankle joint i.e. chondral lesions
“magic angle effect”- because of acute curve in tendons can over/under estimate tears.
Treatment- Non op

- Rest, NSAIDS
- Physio- stretching, strengthening, mobilisation, manipulation.
- Ankle Stirrup or boot
- Cortisone Injections
- 3-6 months
When to do Surgery?

• With tears of brevis, symptoms usually do not subside.
• Brodsky - 20 of 24 pts failed conservative management after 8 months.
• Early surgery large tears
  Failed nonop
Surgical Treatment

- Remove Torn Portion
- Circularise remaining portion
- Decompress tendons at peroneal tubercle
- Repair SPR as needed
Post-operative Care

- 0-2 weeks - Non weight bearing (wound healing)
- 2-6 weeks - Boot-weight bearing
- 6 weeks - ROM, strengthening, proprioception, brace
- RTS 3-6 months
Peroneal Tendon subluxation/Dislocation

- Uncommon injury
- Often missed as an “ankle sprain”
- Always after injury
- “Snowboarders” injury
- Tendons intact, dislocate out of groove
Anatomy

- Rupture of the Superior Peroneal Retinaculum
- Shallow groove
- Allows for tendons to subluxate
- Similar to Bankart Lesion in the shoulder
Mechanism of Injury

- Ankle dorsiflexed
- Forceful contraction of peroneal muscles
History

• Recalls significant injury
• May feel a “snapping” sensation or rupture
• Afterwards, with sport, may experience same snapping, instability
Physical Examination

- Can be missed if not looking for
- Pain over SPR, not ATFL
- Snapping can be reproduced
- Force on tendons behind fibula with eversion
Investigations

- X-rays: rarely may show avulsion SPR
- Ultrasound: dynamic study, reproduce dislocation
- MRI: can demonstrate SPR rupture, and subluxation
Treatment

- Surgical
- Young active pts.
- Nonsurgical has a high failure rate.
- Stover- Immobilisation slight plantarflexion success in 57%.
- Escalas- 74% required surgery
Summary

• Peroneal injuries can cause persistent pain after ankle injury
• Awareness of peroneal pathology
• Dislocations- surgical
• Tears- nonop or surgical
• Tenosynovitis- nonop
Thank You