An Unusual Cause of Heel Pain in a Competitive Figure Skater
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History
- A 21 y/o senior level pairs skater presented with left ankle and heel pain. She had a history of previous lateral ankle pain due to a problem with padding in her boots. New boots had not improved this recent pain.
- She was using corrective foot orthotics due to marked hyperpronation due to tibial varum.

History (cont’d)
- Interesting point: her heel pain was worse with plantar flexion
- Achilles pain is usually worse with dorsiflexion
Physical Examination

- Foot and ankle had full ROM. No edema was present over Achilles tendon or collateral ligaments.
- Tenderness noted to posterior calcaneofibular ligament and peroneal tendons. No tenderness to Achilles, calcaneal apophysis or collateral ligaments.
- Tenderness was found between the Achilles tendon and posterior calcaneus. No edema was noted here.
- Hyperpronation noted on orthotics.

Diagnoses

- Peroneal tendon and calcaneofibular sprain, likely secondary to hyperpronation and pressure of boot padding against lateral ankle region; possible defective padding
- Posterior heel pain

Differential Diagnosis of Posterior Heel Pain

- Common:
  - Achilles tendinopathy
  - Retrocalcaneal bursitis
- Less common:
  - Posterior impingement syndrome
  - Sever’s disease
  - Achilles bursitis
  - Referred pain: neural, lumbar spine (S1)
- Rare:
  - Achilles tendon rupture
  - Achilles tendinopathy due to inflammatory arthropathies
Retrocalcaneal Bursitis

- Usual History:
  - Gradual development of symptoms
  - Typically complains of pain and stiffness on arising in the morning, diminishes with heat or walking
  - Usually diminishes with training but in skaters the constant pressure against the boot worsens the pain

Anatomy

- Location of bursa puts it in direct contact with compression forces of heel lock in boot
- This why plantar flexion made her pain worse

Treatment

- Short term: correct underlying inflammatory process:
  - Ice, rest, Achilles stretching
  - Injection of corticosteroid/anesthetic combination. May need to aspirate fluid from bursa prior to injection and apply compression post-injection for 24-48 hrs.
Treatment

- Long-term:
  - Correct foot and ankle mechanics in boot:
    - Correct hyperpronation or hypersupination with extrinsic orthotic device
  - Correct boot fit: too wide boot or too wide heel/Achilles channel will put abnormal pressure against posterior calcaneus and Achilles tendon
  - Skater may also need to wear orthotics in footwear to provide day-long correction of foot/ankle mechanics

Outcome

- Her treatment consisted of:
  - Injection of 1/2 cc of Celestone Soluspan + 1/2 cc Marcaine into retrocalcaneal bursa. Aspiration was not necessary since there was no edema of bursa
  - New boots
  - Corrected fit of orthotics to increase medial heel posting to straighten Achilles tendon and calcaneus
  - Recheck 10 days later: resolution of all symptoms

Lessons

- All foot/ankle pain in skaters is not a common diagnosis such as plantar fasciitis.
- Look for the unusual!!
Thank You!