Heel Pain: More Than Plantar Fasciitis

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Causes of Heel Pain

- The most common causes of heel pain seen in the office setting:
  - Plantar Fasciitis
  - Bursitis
  - Achilles tendonitis

Other Potential Causes of Heel Pain

- Calcaneal apophysitis (children)
- Arthritis
- Stress fracture
- Achilles tendon problems
- Bone cyst
- Pinched nerve/Nerve entrapment
- Low back or disk problems
- Plus 65 other potential causes

Plantar Fasciitis

- Inflammation and pain along the plantar fascia - the tissue band that supports the arch on the bottom of the foot
- Usually on the bottom of the heel at the point where the plantar fascia attaches to the heel bone
- Becomes chronic in 5-10% of all patients if pain for > 6 months
- Is not necessarily associated with a heel spur
- Over 90% resolve with conservative treatment

Symptoms of Plantar Fasciitis

- Pain on standing, especially after periods of inactivity or sleep
- Pain subsides, returns with activity
- Pain related to footwear - can be worse in flat shoes with no support
- Radiating pain to the arch and/or toes
- In later stages, pain may persist/progress throughout the day
- Pain varies in character: dull aching, "bruised" feeling, burning or tingling, numbness, or sharp pain, may indicate local nerve irritation

Calcaneal Bursitis

- Inflammation and pain along the plantar heel at the base of the calcaneus
- Usually on the bottom of the heel at the point of the bone.
- Becomes chronic in 5-10% of all patients if pain for > 6 months
- Usually associated with movement of the fat pad
- Over 90% resolve with conservative treatment
Symptoms of Bursitis

- Pain on standing for long periods
- Pain increases with activity, less when resting
- Pain related to footwear - can be worse in flat shoes or worn out shoes
- Radiating pain surrounding the heel pad
- Feels like a “Hot lump” or rock in the shoe
- Pain varies in character - aching, “bruised” feeling to the bottom of the heel
- The tuber of the calcaneus easily felt

Achilles Tendonitis

- Inflammation and pain along the posterior heel and the Achilles tendon
- Usually from the bottom of the heel posteriorly and extending superiority from the glabrous skin junction
- Becomes chronic in 5% of all patients with pain for > 6 months
- Usually associated with increased activity or weight
- Over 95% resolve with conservative treatment

Symptoms of Achilles Tendonitis

- With increased activity or weight for extended periods, may form a spur
- Chronic degeneration may form a fusiform deformity in the tendon with scar tissue
- May cause a longitudinal tear of the tendon fibrils with chronic inflammation

Heel Pain Risk Factors

- Biomechanical abnormalities
- Overly tight calf muscle
- Poor shoe choices
- Weight gain
- Barefoot walking
- Work surface

Heel Pain Evaluation & Diagnosis

- Pain with pressure on bottom of heel or arch
- Limping
- Forefoot Weight bearing
- Foot Type: Flat vs. high arch
- X-ray findings - Spur vs. Fracture
- Ultrasound - Possible fibromas or soft tissue tumor
- Abduction of the 5th digit for possible nerve entrapment of Baxter’s nerve
- MRI - if conservative measures do not help, may be a rupture, stress fracture, cyst or tumor, chronically inflamed bursa

Heel Pain Treatment

- Mechanical - treat the CAUSE
- Anti-inflammatory - treat the PAIN
- Usually Combination
Heel Pain Treatment

- Stretching, shoe modifications, avoid walking barefoot
- Icing and rest
- Night splint or CAM boot
- Arch support (OTC vs. custom orthotics)
- Heel cups or pads
- Anti-inflammatory medication
- Meloxicam, Ibuprofen, Medrol pack
- Steroid injections
- Taping and bracing
- Physical therapy
- If conservative measures fail, surgery is an option

Heel Pain injection

- Usually 3 mL for plantar fascia and bursitis
- 1 mL of 2% lidocaine, 1 mL of 0.5% Marcaine, 1 mL of Depomedrol 40 mg or Kenolog 40

Other options for heel pain

- Over 90% of heel pain patients respond to initial therapies within a relatively short period of time
- For unresponsive cases, options include:
  - Minimally invasive procedures like ESWT (Extracorporeal Shock Wave Therapy)
  - Autologous Platelet Concentrate (PRP) injection
  - Surgical procedures, open or endoscopic
  - Radiofrequency techniques

Thank you

- Questions?