

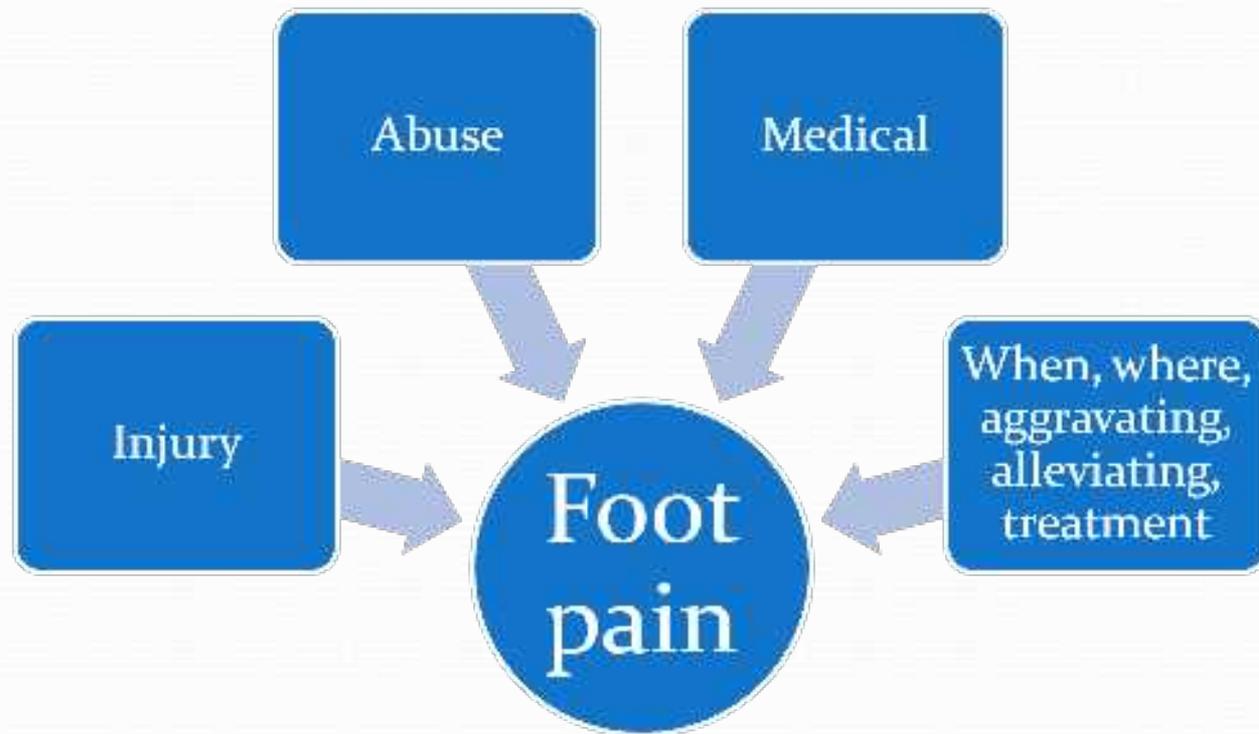
Plantar Fasciitis

Case scenario

- A 45 year old teacher presents to your clinic with a complaint of L foot pain for the last three months
- He states the pain is so bad he is limping around his classroom by the afternoon
- What else do you want to know?



History



Differential Diagnosis: Plantar aspect of heel

- Plantar fasciitis
- Plantar fascia rupture
- Heel pad atrophy
- Tarsal tunnel syndrome
- Nerve dysfunction of tibial, plantar, or calcaneal nerves



Differential Diagnosis: Plantar Aspect of heel

- Neuroma
- Bone cyst
- Osteomyelitis
- Fracture
- Tumor
- Paget's disease



Plantar Fasciitis- some facts

- Most common cause of foot pain in outpatient medicine
- Majority of cases occur in patients with no other disease
- Usually results from excessive standing and improper footwear, although the pathophysiology is not well understood



Plantar Fasciitis- a review



Pathophysiology



- Thought to be a combination of:
 - Thickening of the proximal plantar fascia
 - Decreased vascularity
 - Perifascial inflammation
 - Altered nociceptor function

Case Scenario- physical exam

- Appearance of patient
- Footwear
- Gait
- Foot appearance
- Palpation
- ROM/sensation



Physical exam- hints

Clinical Entity	History	Physical Exam
Plantar fasciitis	Morning pain or pain on standing after prolonged sitting	Tenderness over calcaneus, increased pain with passive dorsiflexion of toes
Achilles tendonitis	Pain with running, jumping or making quick turns	Pain and tenderness over insertion of Achilles tendon on calcaneus, pain may increase with dorsiflexion
Retrocalcaneal bursitis	Still posterior shoe edge	Pain and tenderness at posterior calcaneus
Tarsal tunnel syndrome	Pain or numbness in heel radiation to the sole and toes	Reproduction of symptoms with percussion of tarsal tunnel or dorsiflexion and eversion of foot

Case Scenario- investigations

- Would you do any?
- Foot x-ray
- +/- Inflammatory markers



Plantar Fasciitis- treatment

- Still no truly effective treatment
- Imposing an interval of days without prolonged standing or arch supports
- Physiotherapy
- Night splints



Plantar Fasciitis- treatment

- NSAIDS for pain relief
- Severe cases, lidocaine injection into most tender area of foot
- Rarely, surgical release of plantar fasciia



Extracorporeal shock wave therapy

- Literature started appearing around 1990
- Still not considered a mainstay of therapy
- For patients with chronic plantar fasciitis not responding to traditional methods of treatment



Extracorporeal shock wave therapy

- Treatment usually consists of three treatments one week apart with 1000 pulses of low energy shock waves to the point of maximal tenderness upon palpation.
- A meta-analysis by Ogden *et al* of 840 patients found 88% had marked improvement after treatment



Case Scenario

- X-ray negative for any fractures
- Diagnosis of plantar fasciitis
- Recommendations for your patient?
 - Orthotics (custom vs. ready-made)
 - NSAIDS
 - Stretching exercises
 - Rest



Case Scenario

- Your patient returns 2 months later with little improvement in his heel pain.
- Now what?
 - Physiotherapy
 - Injections
 - Extracorporeal shock wave therapy
 - Surgery
 - Live with problem



References

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