Phalanx Fractures of the Foot

See also Phalanx Fx, Foot

Background

1. Very common fracture
2. Seen in sports not requiring footwear
    - Martial arts
    - Yoga
    - Gymnastics

Pathophysiology

1. Mechanism
    - Axial force
        - Stub toe on turf / floor
        - Crush injury (player steps on foot)
    - Hyperextension injury
        - Less common
        - May cause spiral or avulsion fracture
    - Stress fractures are rare

Diagnostics

1. Swelling, bruising, pain worse w/standing
2. Always evaluate capillary refill
3. Evaluate toenail for hematoma
4. X-ray: AP, lateral, oblique

Therapeutics

1. Acute phase
    - RICE
    - NSAIDs
2. Stable non-displaced fracture
    - Buddy tape to adjacent toe until no tenderness
    - Rigid sole shoe
3. Lesser toe displaced fracture
    - Reduction
    - Buddy tape
4. First toe displaced fracture
    - Reduction
    - Post-reduction x-ray
    - Rigid immobilization w/cast shoe or walking boot
5. Surgical referral
    - Circulatory compromise
    - Open toe fractures: high osteomyelitis risk
    - First toe fractures
        - Unstable fractures that spontaneously displace
        - >25% intra-articular involvement
    - Difficult fracture reduction

Prognosis

1. Return to play
    - 4-6 wks after non-operative case
    - Sport-specific activity allowed when radiographic union verified and full ROM restored
2. Complications
    - Persistent pain
    - Activity intolerance
    - Malunion
    - Degenerative joint dz
    - Osteomyelitis (open fracture)

Patient Education

1. http://www.footphysicians.com/footankleinfo/metatarsal-fractures.htm

References

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3. http://www.aafp.org/afp/20031215/2413.html
4. http://aapgrandrounds.aappublications.org/cgi/content/extract/5/4/40-a

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