Proximal Fifth Metatarsal Fracture
See also Metatarsal Fractures

Background
1. Most common site of midfoot fractures
2. Two types
   - Jones fractures
   - Pseudo-Jones fractures: "Ballet Dancer's Fracture"

Pathophysiology
1. Proximal fifth metatarsal comprised of three zones
   - Zone 1: most proximal area
     - Attachment of peroneus brevis
     - Lateral plantar aponeurosis
     - Articulation w/cuboid
     - Pseudo-Jones fracture seen in this zone
       - Proximal avulsion fracture
       - Associated w/lateral ankle sprain
   - Zone 2: metaphyseal diaphyseal junction
     - Jones fracture
     - Transverse fracture at base of 5th metatarsal
     - 1.5-3cm distal to tuberosity
     - Associated w/
       - Pivoting foot or cutting w/ankle plantar flexed (w/heel off ground)
       - Adduction force to forefoot
   - Zone 3: proximal diaphysis
     - Prone to stress fractures

Diagnostics
1. X-ray: AP, lateral, oblique
2. Jones Fracture Torg Classification System:
   - Type I
     - No intramedullary sclerosis
     - Well-delineated fracture line
     - Minimal cortical hypertrophy
   - Type II (delayed union)
     - Fracture line involves both cortices w/periosteal new bone
     - Widened fracture line
     - Intramedullary sclerosis
   - Type III (nonunion)
     - Wide fracture line w/periosteal new bone and radiolucency
     - Sclerotic bone
     - Obliterated medullary canal

Therapeutics
1. Pseudo-Jones fracture
   - Conservative/ symptomatic tx
   - Wt bearing as tolerated
• Most heal in 6-8 wks

2. Jones fracture
   o Type I
     • Non-wt bearing
     • Immobilized for 6-8 wks
   o Type II & III:
     • Operative tx w/bone graft or intramedullary screw fixation
       • Shown to reduce time to clinical union by 50%
     • Fitted w/well-padded splint/ cast
     • Wt bearing 7-10 days post-op

Prognosis
1. Return to play
   o Pseudo- Jones fracture
     • Gradual return to play (verify radiographic union)
   o Jones fracture
     • Start moderate aerobic work 2-3 wks post-op
     • 12 wks for sport-specific activities (verify radiographic union)

2. Complications
   o Sural nerve damage from intramedullary screw
   o Non-union
   o Refracture
   o Screw breakage

Patient Education
1. http://orthopedics.about.com/cs/lowerfx/g/fifthmetatarsal.htm

References
Evidence-based Inquiry

1. What is the most effective management of acute fractures of the base of the fifth metatarsal?

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