

Tibia Plafond Fractures and Ankle Fractures

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Tibia Plafond Fractures

Terminology

- Pilon or pylon - description of accident
 - Destot 1911 Hammer
- Plafond - anatomical
 - Bonnin 1950 - roof

Mechanism

Mechanism

- Axial load
 - plantar flexion - posterior articular damage
 - dorsiflexion - anterior articular damage
- Usually some rotational component
- Fibula intact 25% of cases

Injury

Injury Patterns

- 20 - 25% open
- 5 - 10% bilateral
- 30% ipsilateral injuries
- 15% spine, pelvis, upper extremity

Associated Injuries

Associated Axial Load Injuries

- Long bone fractures
- Vertical shear pelvic injuries
- Compression or bursting fractures of vertebral column

Associated Injuries

Pre-op Assessment (cont.)

- Plain radiographs
 - obliques and traction views
- CT scan
 - 3-d reconstructions, lateral reconstructions
- Pre-op plan (approach both fibula and tibia), reduction, fixation, compartment syndrome

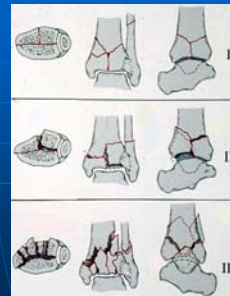
Soft Tissue



Classification Rüedi-Allgower

- Type I is a **nondisplaced** fracture
- Type II has **displacement** of the articular surface,
- Type III has **comminution** of the articular surface

Classification Rüedi-Allgower



Assessment

Pre-op Assessment

- Soft tissue
- Soft tissue
- Soft tissue

Treatment

- Type I - can generally be treated in casts or ORIF
- Type II - are best suited for ORIF
- Type III - the treatment External Fixation and/or ORIF

Surgical Goals

Surgical Goals

- Restore length - fibula fixation (lateral column)
- Anatomic reduction of the articular surface
- Bone graft
- Stabilize medial column

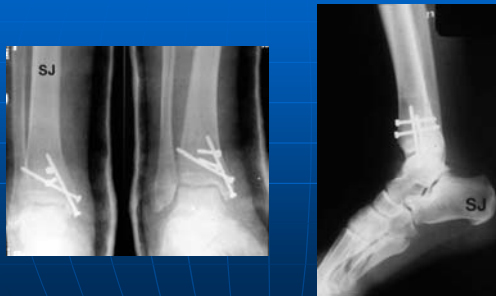
Examples



Examples



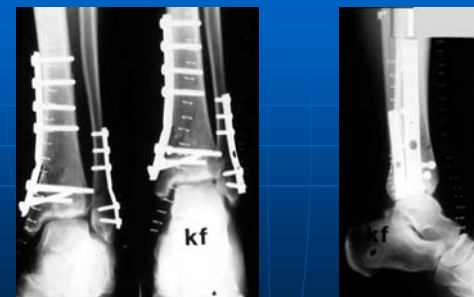
Examples



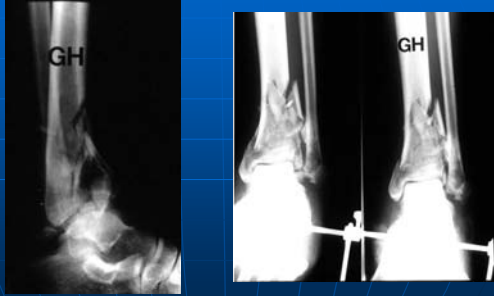
Examples



Examples



Examples

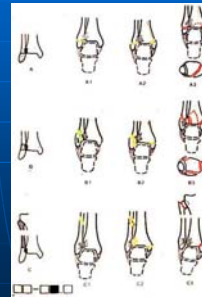


Ankle Fractures

Classification Danis-Weber

- Simple
- The "A" fractures are below the syndesmotic ligament.
- The "B" fracture occurs in this syndesmotic area.
- The "C" fractures occurs above the syndesmosis and by definition the syndesmotic ligament has to be injured.

Classification Danis-Weber



Treatment

- Base on
 - Fracture
 - Displacement
 - Shortening

Non-Operative

- Displacement is < 2mm
- No Shortening

Non-Operative



Operative

- Displacement >2mm
- Shortening



Operative

- 0 – 10 days
- In general **Not** an Emergency
- Outpatient vs Inpatient
- Swelling

Surgery

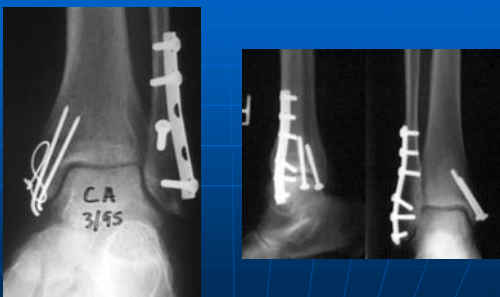
Lateral Malleolus

- Lag Screws
- Posterior Plate
- Hook Plate
- Lateral Plate

Medial Malleolus

- Tension Band
- Plate
- Lag Screws

Surgery



Thank you

