

Hindfoot and Midfoot Trauma Pearls of Treatment

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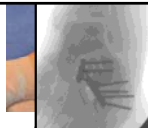


Calcaneus

- The Debate is about Sinus Tarsi Versus Extensile Lateral Approaches
- In Reality we should be aiming for the least invasive and most stable anatomic reduction
 - Less scarring and infections, and better function

Pearls - the Mini-incision Approaches?

- Medial – Bordeaux, no direct reduction of post facet
- Medial and limited lateral
- Percutaneous Fixation
 - No signif joint displacement

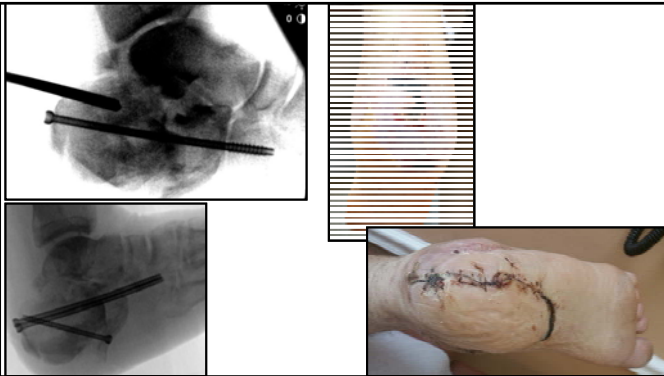


Percutaneous Fixation



What do you think?





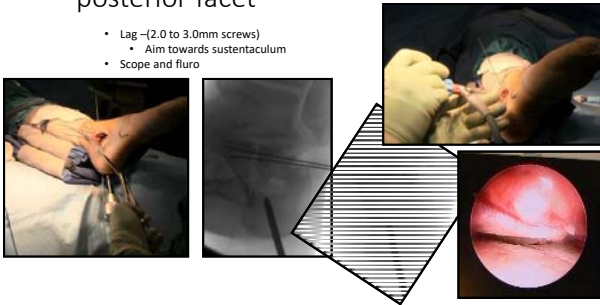
Sinus Tarsi Incisions

- Fix Before 14 days
- Medial External fixator first
- Extend incision 1 cm up on fibula
- Dry arthroscope
- Lag screws – smaller, parallel to joint
- Plate – anterior to posterior



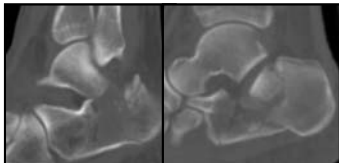
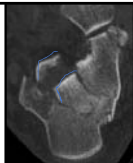
Pearls-Reduction and stabilization of posterior facet

- Lag –(2.0 to 3.0mm screws)
 - Aim towards sustentaculum
- Scope and fluoro



Contraindications

- Sander's 3 part fractures with posterior fragments
- You do not think that you can achieve an anatomic reduction
- ***Small Incisions with a poor reduction achieve nothing!!!***



Fixation Options

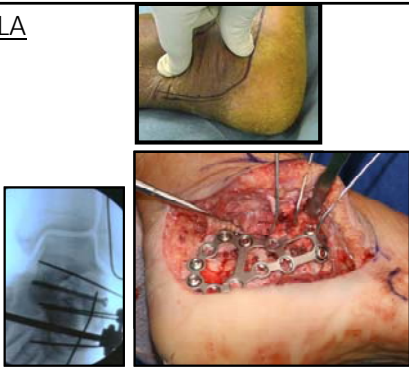


Unstable Peroneal Tendons



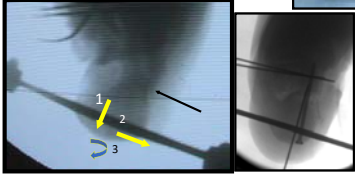
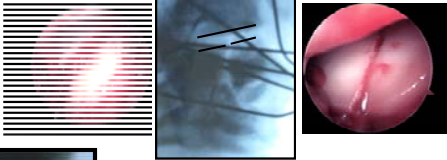
Technical Pearls - ELA

- Fractures of any complexity
- Operate at the right time
- Modified extensile lateral approach
 - More posterior
- No touch technique
- Independent lag screw first
- Fix anterior to posterior
- Half pin to reduce posterior tuberosity

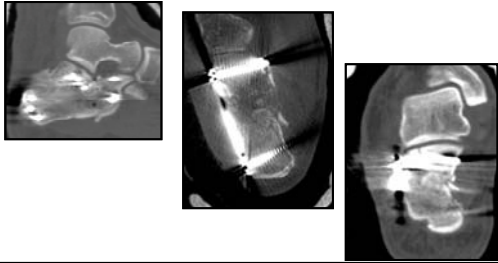


Similarities

- Must restore –
 - Articular alignment
 - Height
 - Axial alignment
 - Width




Get postop CT to learn and get better!!!



Talus Fracture / Dislocation – Technical Trick

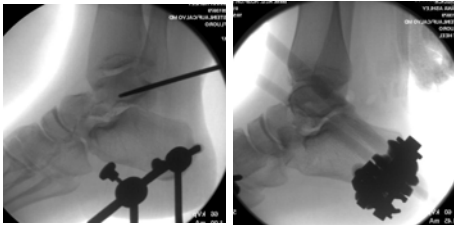
1. These must be reduced urgently
2. Closed vs. open
3. ER vs. OR



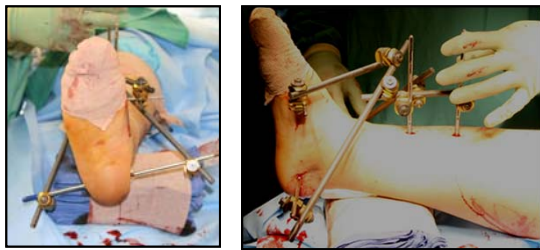
Talus Fracture / Dislocation



Talus Fracture / Dislocation

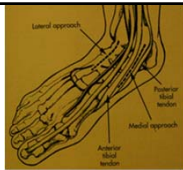


Talus Fracture / Dislocation



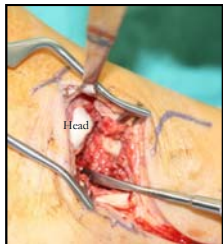
Surgical Approach

- Always use a dual incision
- Single incision – Risk of malunion
- Extend the incisions proximally to perform the malleolar osteotomies



Technical Pearl – Talar Neck Comminution

- Crushed medial neck
- Fibular graft to correct



Surgical Pearls For Talar Body Fractures

- Radiolucent foot board
- Use distraction –
 - Calcaneal traction - difficult
 - [Temporary external fixation](#)
- Arthroscopic assistance is invaluable
- Have all necessary implants –
 - Small K-wires
 - [Bioabsorbable pins](#)
 - Minifragment plates and screws (cannulated vs. solid)
- Be biologically friendly


Medial Malleolar Osteotomy

- Oblique
 - Do not strip all tissues
 - Protect the posterior tibial tendon
 - Sagittal saw with saline cooling
 - Complete with an osteotome
 - ORIF with 2 screws
 - Predrill
- **Antiglide plate!**




Lateral Malleolar Osteotomy

- Short Oblique
- Leave posterior soft tissues intact – rotate the fibula posteriorly
- Protect the peroneal tendons
- Plate vs screws
- Repair lateral ligaments



Technical Pearl – Avoiding Osteotomies



Lisfranc Injuries – Weight Bearing Xrays !!!

- 20 y.o. twisting injury
- Moderate midfoot swelling
- Minimal tenderness at the midfoot
- No ecchymosis



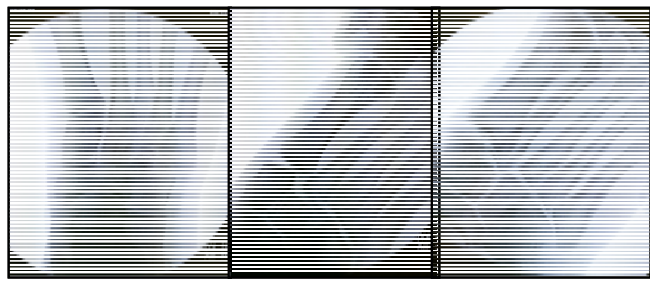
Stress Xrays in The Office?

Normal side

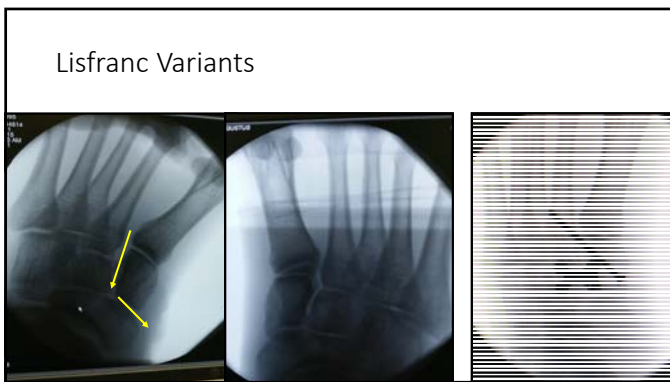
Painful Side



Intraop Stress Xrays



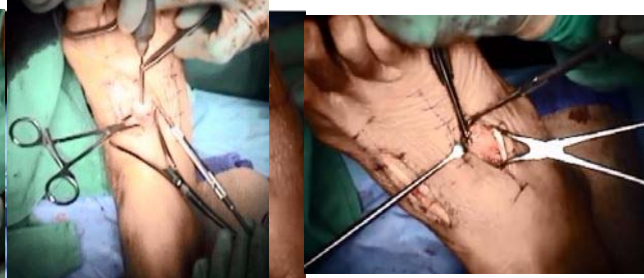




Treatment

- For Acute injuries –
 - Internal Fixation versus Arthrodesis of joints 1, 2, and 3?
 - I am performing arthrodesis in "almost all" cases.
 - What should we do with the 4th and 5th joints?
 - Arthrodesis – never
 - Fixation only if needed

Lisfranc Injury-
Technique for ORIF/Primary Fusion



Case Study

- 50 y.o. man after car ran over his foot
- Impending skin necrosis from pressure of cunneiform



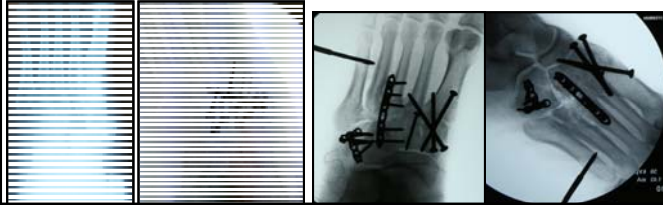
Case Study

- All Five joints are unstable
- Too swollen for definitive surgery day 1
- Percutaneous reduction and pinning
- Lateral Cunneiform Comminution



Navicular and Cuboid

- First Pearl – Do not miss them
- Second pearl - Cuboid fractures are usually associated with other injuries
- Medial and lateral column distraction helps



Chopart Injuries

