

Simple Lateral Plateau Fractures Tips & Tricks

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Simple Lateral Plateau Fractures Tips & Tricks

- Preoperative considerations
- Positioning
- Exposure
- Reduction

Preoperative Considerations

Anatomy

<ul style="list-style-type: none">• Medial Plateau<ul style="list-style-type: none">- Concave- Larger- Cartilage thick ~ 3 mm- Posterior slope of 10°	<ul style="list-style-type: none">• Lateral Plateau<ul style="list-style-type: none">- Convex- Higher on lateral view- Larger meniscus
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Gerdy's Tubercle

Preoperative Considerations

Timing of Surgery

- Soft tissue envelope
 - Swelling
 - Ecchymosis
 - “Damage Control Orthopaedics”

Preoperative Considerations

- Temporary Stabilization
 - Soft Tissue Rest
 - Bony Stabilization
- Bridging ExFix
 - Across the Knee
 - **Pins Out of Zone of ORIF in Tibia**
- ORIF When ST Allow

Positioning

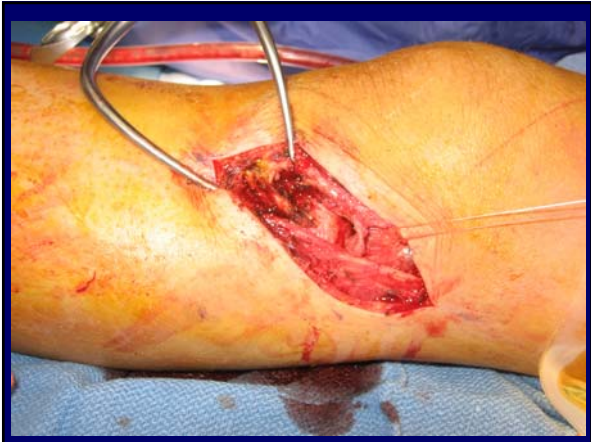
- Supine
- Standard OR table or Flat Jackson
- Thigh tourniquet
- Bump under affected hip
- Elevated ramp or blankets
- Knee flexion degrees





Exposure

- Centered over Gerdy's
- Sub meniscal arthrotomy
 - Meniscal repair
 - Direct joint visualization
 - Tag for repair to plate holes



Exposure
Intra-Operative Distraction

- Ligamentotaxis
 - Helps with Condyle Architecture
 - Does not reduce Joint Depression
- Joint Distraction
 - Temporary Bridging ExFix
 - Femoral Distractor

Exposure

An intra-operative photograph showing a knee joint with a surgical incision. The joint is held open by metal retractors, revealing the internal structures. A surgical instrument is visible in the field. The skin is yellowed, and there is some blood visible in the surgical field.

Exposure

- Improved visualization
- Lighted fraiser suction



Reduction

- Bone tamps
- Cortical window
- Elevate depressed fragment from below
- 1.0-1.5 cm of metaphyseal bone

Reduction

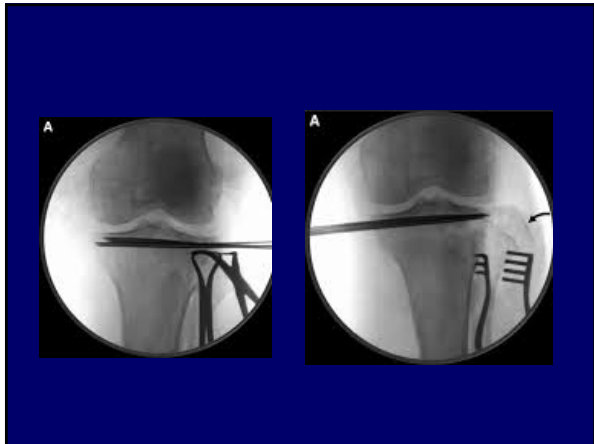


Reduction



Reduction

- Once joint elevated, support with K-wires
- “Pass through” wires
- Sub chondral support with 2.7 / 3.5 “rafter screws”



Biomechanics
Subchondral Fixation

- 3.5 mm raft construct allowed significantly less displacement than 6.5 mm screw with axial load
- No difference in pull out strength between 6.5mm screws and 3.5mm screws in subchondral bone

23 year old male fall from height

