Intertrochanteric/Subtrochanteric Fracture: IM Nail

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Workup

- Age
  - Activity level
    - Independent
    - Living situation
- Existing medical comorbidities
- Medical vs. Orthopaedic admission

Classification

- AO/OTA
- Stability
  - Lateral wall
  - Reverse obliquity
Stable vs. Unstable

- Stable
  - Extramedullary
- Unstable
  - Fixed angle or side plate
  - Intramedullary
    • Shorter moment arm

Fixation Options

- Cephalomedullary nail
  - Blade
  - Screw
  - Compression Screw
- Reconstruction Nail

Set Up

- Traction table
  - AP/Lateral views
    • Starting point
  - Adduction
    • Aids in insertion of opening reamer
    • Can increase varus deformity
  - Arm across chest
Reduction

- Iliopsoas
  - inserts on the lesser trochanter
  - flexes and externally rotates the proximal fragment
- Adductor
  - distal femur toward the midline and into external rotation
- Traction and internal rotation of foot

Reduction

- Avoid varus
  - Starting point at tip of trochanter for most nails
  - Lateral start=varus
  - Fracture pattern
    • Can lead to lateral start
    • Remove bone if necessary
  - Ream medially
  - Maintain reduction during reaming

Nail Placement

- Short vs Long
  - Reaming
  - Stability of fracture
  - Mismatch of bow
    • Radius of curvature
    • Average 120 cm (±36 cm)
    • Nails have larger radius of curvature (straighter)


Nail Placement

• Avoid mismatch
  – Assess position of guide-wire
    • Lateral of knee
    • Anterior=blocking screw
  – Larger diameter nails=stiffer
  – Breach of anterior cortex