Trauma 101: Nailing Unstable Proximal Femur Fractures
Conor Kleweno, MD
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Disclosures

• Consultant: Globus Medical

What are the issues?

• Quality reduction
• Open vs. closed techniques
• Short nail vs. long nail?
What are the issues?

- Quality reduction
- Open vs. closed techniques
- Short nail vs. long nail?

Quality Reduction

- Common Fallacy: Nail will Reduce the Fracture
  – OK for isthmic fractures, however...
- It is critical that the surgeon:
  – Reduce the fracture
  – Maintain the reduction
  – Place the nail across a reduced fracture
  – Lock the nail with the fracture reduced

Failure to reduce prior to nailing!
Case: Proximal Femur Fracture

- What is Deformity?
  - Flexion
  - Varus
  - External rotation

- When you put the “if” in ORIF:

  **Leads to ... non-union!**

Case: Proximal Femur Fracture

- Lateral view

- Flexion deformity

Nail worsens alignment!
Case: Proximal Femur Fracture

- Revision
- Correct varus

Open vs. Closed Reduction

**Techniques**

- Positioning
- Traction
- Starting point
- K-Wires
- Schanz pins
- Bone hook
- Spiked pusher
- Distractor
- "Finger"
- Open reduction
Positioning

Supine with traction

Lateral

- Flexed
- Adducted
- Obesity
- Start point
- Subtroch
- Open reduction

Lateral Imaging: AP
Reduction Techniques: Start Point

- High variability for ideal trochanteric start point

Is There a Standard Trochanteric Entry Site for Nailing of Subtrochanteric Femur Fractures?

- High variability for ideal trochanteric start point

Reduction Techniques: Perc Hook
Reduction Techniques: Start Point

Reduction Techniques: Provisional K-Wires

Reduction Techniques: Provisional K-Wires

Anterior in Neck
Reduction Techniques:
Provisional K-Wires

Thus there is room for recon screws

Reduction Techniques:
Perc Clamp + K-Wires

Traction

Reduction Techniques:
Perc Clamp + K-Wires
Reduction Techniques: Perc Clamp + K-Wires

Insert wires out of way of instrumentation

Reduction Techniques: Perc Clamp + K-Wires

A → P Wires

Reduction Techniques: Bone Hook
Reduction Techniques: Spike Pusher

Reduction Techniques: Open Reduction

• It’s ok to ORIF
• Minimal soft tissue stripping
Open Reduction: Final X-rays

Short vs. Long?

Short Versus Long Cephalomedullary Nails for the Treatment of Intertrochanteric Hip Fractures in Patients Older than 65 Years
Cecil Kincaid, MD, Jordan Mariga, MD* James Bowers, MD† Mitchell Janis, MD‡ Edward Rodrigues, MD, PhD* Daniel Zuckerman, MD* Mark Frakes, MD* and Paul Jaffrani, MD† (J Orthop Trauma 2014;28:510–517)

Short versus long intramedullary nails for treatment of intertrochanteric femur fractures (OTA 31-A1 and A2).


Short vs. Long?

• Quicker to do short nail
• Same outcomes
Summary

• 1st reduction, then nailing

• Closed or open – multiple techniques

• Short or long nail

Thank You!