



Ep 04 Notes- Femur Fractures- Dr. Bernstein

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Case: 30 yo M who presents to the ED s/p MCC with gross deformity to the thigh

History/Physical

- Often high energy in younger patients; low energy in elderly patients
- ❖ Motor vehicle collisions, motorcycle collisions, pedestrian vs car, gunshot wounds, and falls from height
- ❖ Look out for injuries throughout the femur (neck, intertrochanteric, and distal femur), patellar fractures, tibial fractures, acetabular fractures, and pelvic ring fractures. **Make sure patients undergo full ATLS evaluation in most cases.**
- ❖ - Inspect for any open wounds, degloving injuries, or bruises
 - Palpate all extremities, the pelvis, and the spine
 - Neurovascular exam looking for any neuro or vascular deficits in the lower extremity (Remember the potential for blood loss into the soft tissues of the thigh)

Radiographs

- ❖ Full length anteroposterior (AP) of Femur
- ❖ Lateral radiograph of Femur
- ❖ Also should obtain hip and knee films (**Femoral neck fxs are often missed**)

Treatment

These fracture should be stabilized as soon as possible for patient have better overall outcomes with early stabilization of femur fractures



- ❖ Intramedullary Nail - standard for Femoral shaft fracture
 - ❖ Antegrade
 - Starting point can be at Piriformis fossa or Greater trochanter
 - a. Piriformis starting point aligns with femoral canal but may be able to reach in obese individuals
 - b. Possible damage to the medial femoral circumflex artery, the obturator internus and externus muscles
 - c. Greater trochanteric starting point has easier starting point location and requires special nail with proximal bend
 - d. Associated with hip pain
 - ❖ Retrograde
 - a. Proper starting point at the apex of Blumensaat line in line with the femoral canal on the lateral radiographic imaging and center of intercondylar notch on AP imaging.
 - b. Associated with knee pain
- ❖ Reaming
 - This is also standard now and allows for placement of a larger nail which increases stability of the fracture. May also increase healing of the bone as well.

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Regardless of technique used you must ensure you get the appropriate **length, alignment, and rotation of the femur.**

Should also get a good image of the **femoral neck postoperatively, as well as a knee exam.**



<https://youtu.be/ahllaLB49-k> - IMN of Femur Shaft fracture - **OrthoTube**

Nailed It Ortho podcast episode 4

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References:

Ricci, W., Gallagher, B., Haidukewych, G. Intramedullar nailing of femoral shaft fracture: current concepts. *J Am Acad Orthop Surg.* 2009 May;17(5): 296-305.