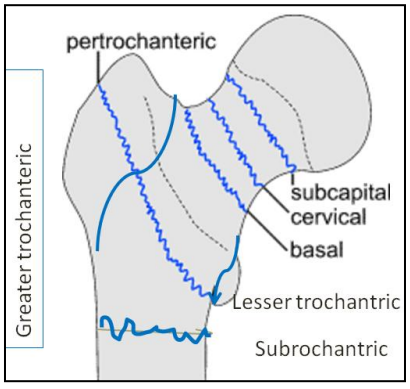
Unit VII – Problem 4 – Clinical: Hip Fractures

- **Case**: 75 years old male brought to A&E department by ambulance after a history of fall while trying to stand up from a chair and complain of inability to walk.

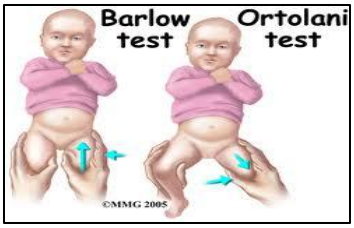
Intertrochanteric fracture

  - **What can be your differential diagnosis?**
    - ✓ Fracture of pelvis.
    - ✓ Fracture of femur.
    - ✓ Fracture of the knee.
    - ✓ Fracture of the ankle.
    - ✓ Even a fracture in the little toe will make a person unable to walk.
  - **Why we assumed these differential diagnosis instead of deciding that it is a hip fracture?**
    - ✓ Because the chief complaint of the patient was (inability to walk) without specifying the location of the pain.
  - **To reach your definite diagnosis, a complete history must be taken:**
    - ✓ Chief complaint.
    - ✓ Age.
    - ✓ When?
    - ✓ Where?
    - ✓ How? (note that any fracture in a patient who is 2 years old or less is considered child abuse until proved otherwise).
    - ✓ Present medical history.
    - ✓ Past medical history.
    - ✓ Surgical history.
    - ✓ Allergy.
    - ✓ Social and family history.
  - **Then, you must examine the patient (physical examination):**
    - ✓ Look (inspection).
    - ✓ Feel (palpation).
    - ✓ Move (active-passive-against resistance) with measurements.
    - ✓ Special tests.
  - **How would your management differ if the fracture was in the hand instead of being in the femur?**
    - ✓ A fracture in the femur can kill the patient if not treated as soon as possible due to huge amount of blood loss (up to 2 liters of blood!). this blood loss will lead to hypovolemic shock and eventually death.
  - **To manage this patient (with fracture of the femur):**
    - ✓ Start with IV fluid.
    - ✓ Immobilize the patient (Thomas splint).
    - ✓ CBC.
    - ✓ ECG and chest X-ray (especially if the patient is 40 yrs or older as recommended by WHO).
    - ✓ Prepare the patient for surgery:
      - ❖ *Intracapsular fractures of the femur (subcapital-transcervical-basal):* replacement (total arthroplasty: femur & acetabulum – hemiarthroplasty: only head of femur)
      - ❖ *Extracapsular fractures of the femur (greater trochanter-lesser trochanter-intertrochanteric-subtrochanteric):* fix.



- **From left to right**: subcapital – transcervical – basal – greater trochanter – lesser trochanter – intertrochanteric – subtrochanteric.
- **Hip dislocation:**


  - **Posterior dislocation (90% of cases):** hip is adducted and internally (medially) rotated. The affected limb will be shorter than the normal one.
  - **Anterior dislocation:** hip is abducted and externally (laterally) rotated.
  - **Cause of hip dislocation:**
    - ✓ Motor vehicle accidents: most common cause.
    - ✓ Falls from height (such as a fall from a ladder).
- **Developmental dysplasia of hip (DDH): occurring in 1/1000 births**
  - **Risk factors (5 f's):**
    - ✓ First born.
    - ✓ Female.
    - ✓ Family history.
    - ✓ Feet (breech position).
    - ✓ Fluid (oligohydramnios).



  - **Special tests:**
    - ✓ Ortolani: < 6 months of age.
    - ✓ Barlow: < 6 months of age.
    - ✓ Galeazzi: > 6 months of age.
  - **Investigations:**
    - ✓ If the baby is <5 months: ultrasound.
    - ✓ If the baby is >5 months: plain radiograph.
  - **Treatment of DDH:**
    - ✓ In first 5 months: treated by pavlik harness (very high success rate).
    - ✓ 6 months-18 months: hip spica.
    - ✓ > 18 months: osteotomy