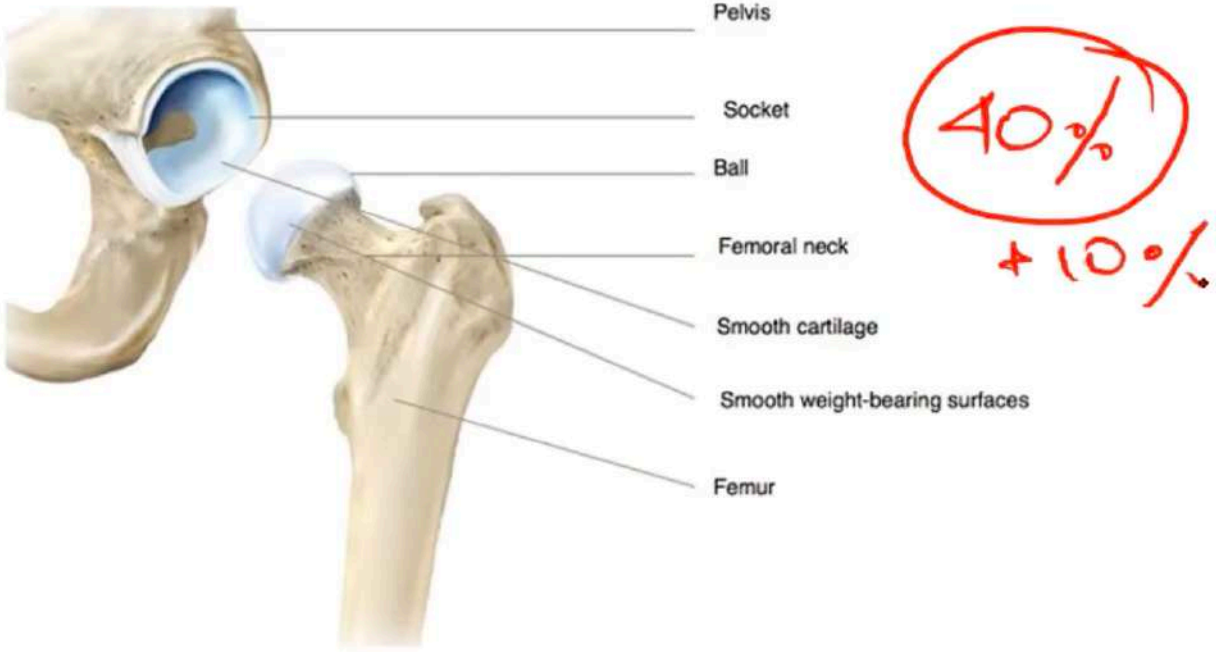
Hip Dislocation

DR ANURAG TIWARI

MS (Ortho), DNB, MNAMS, FIJR (USA)

Faculty, TargetOrtho

Anatomy

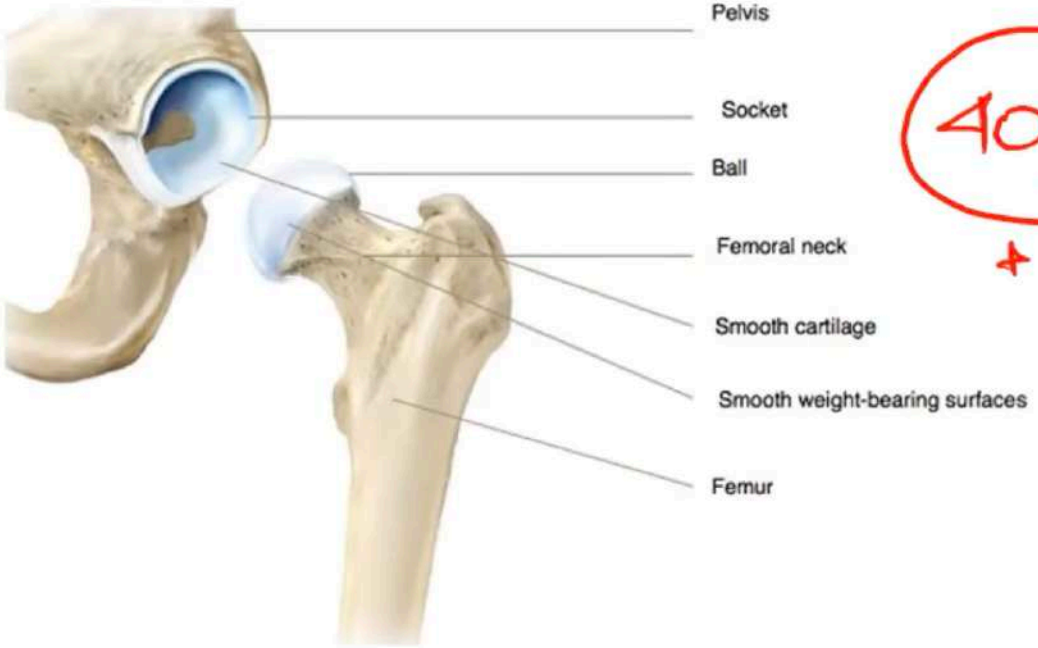


95%

40%

+10%

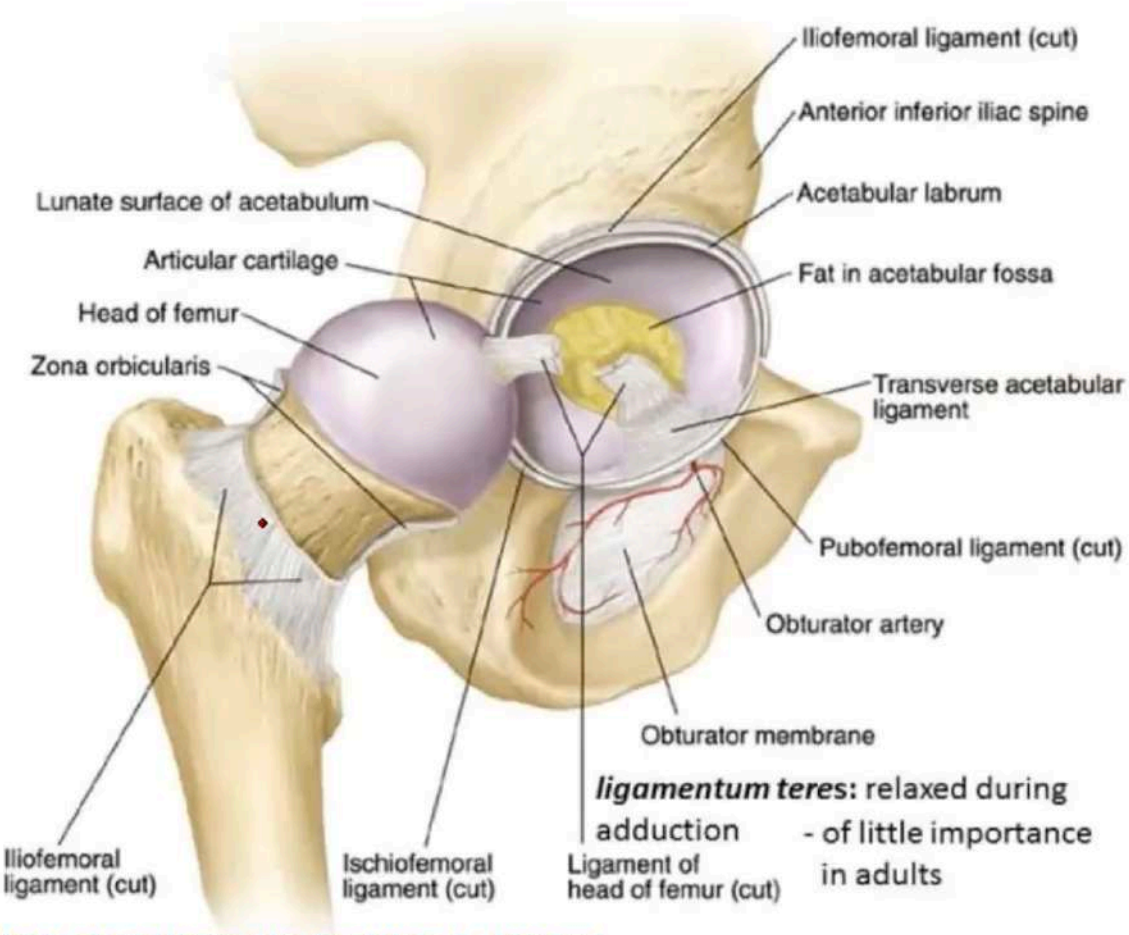
Anatomy



95%

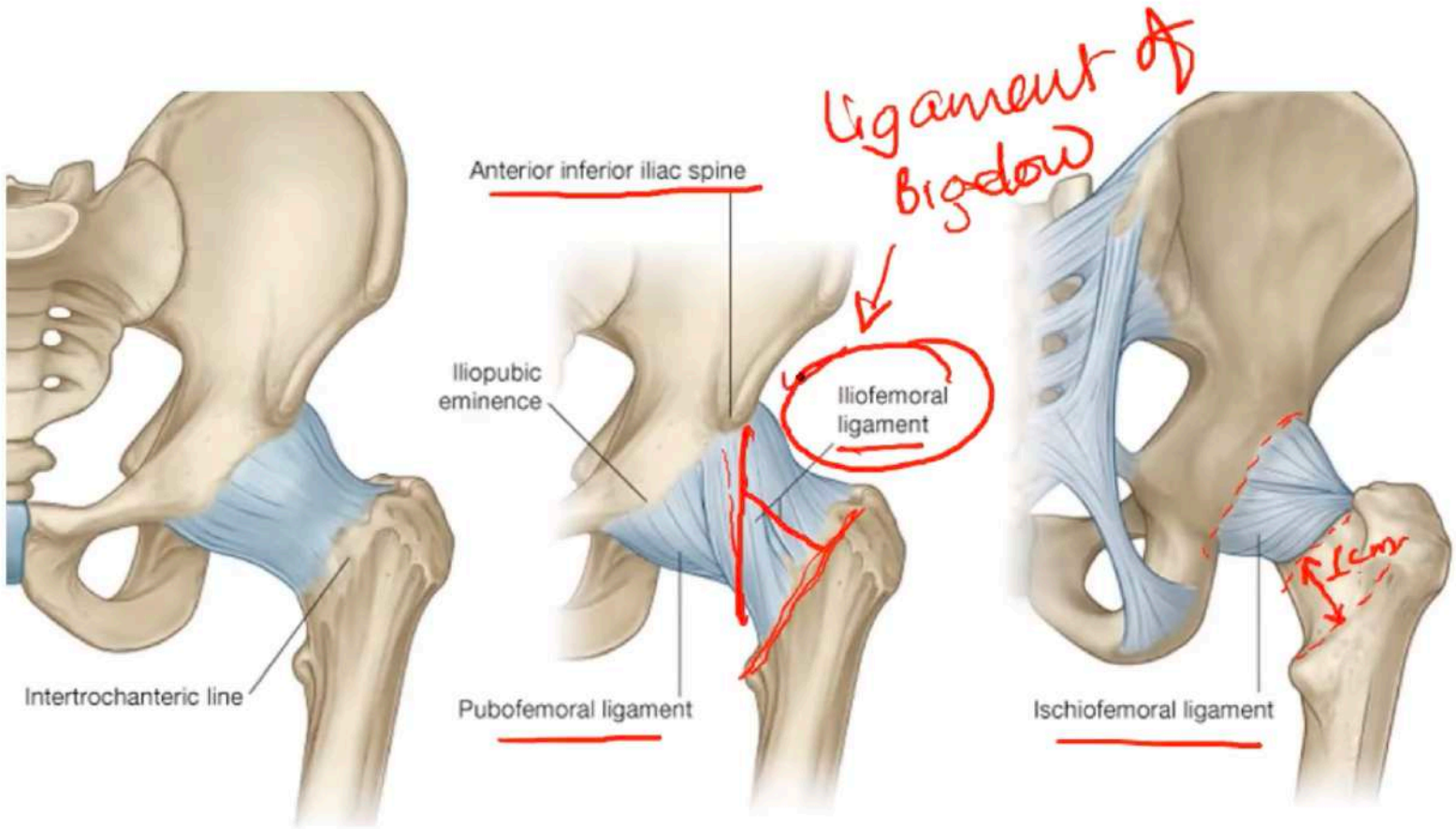
40%

+10%
labrum.

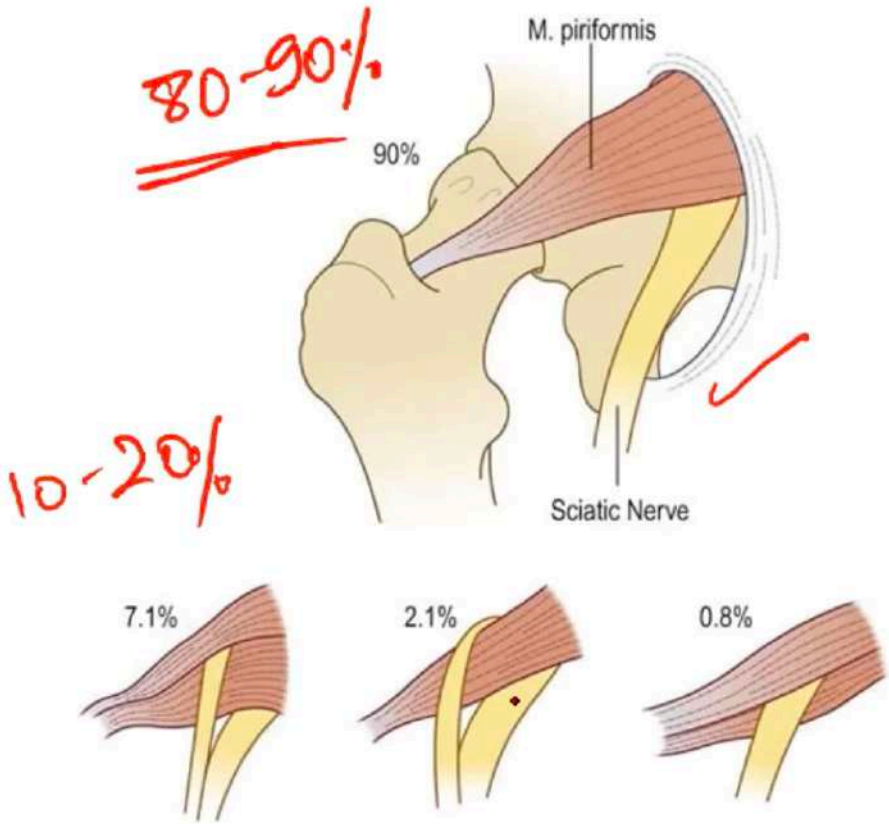


***ligamentum teres*: relaxed during adduction - of little importance in adults**

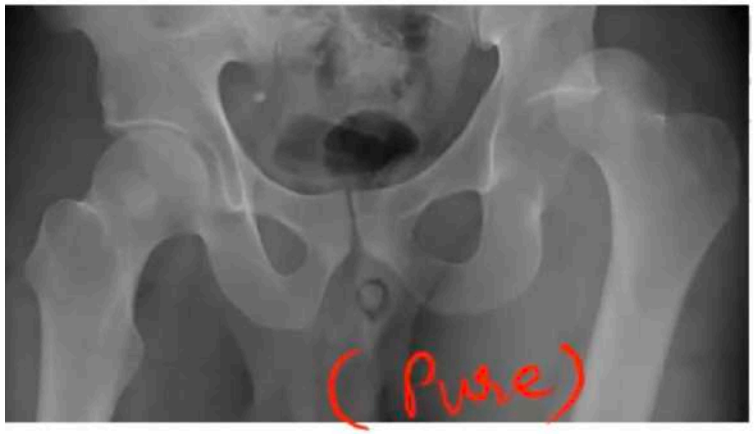
Ligaments of Hip Joint

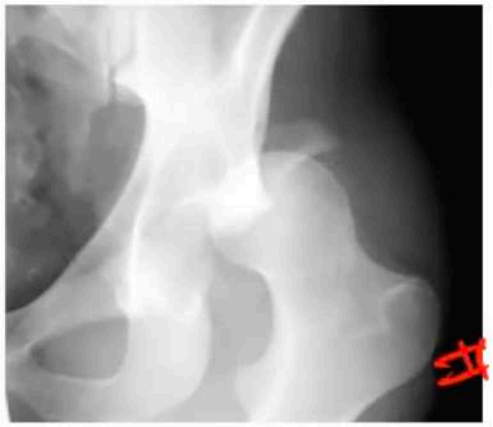


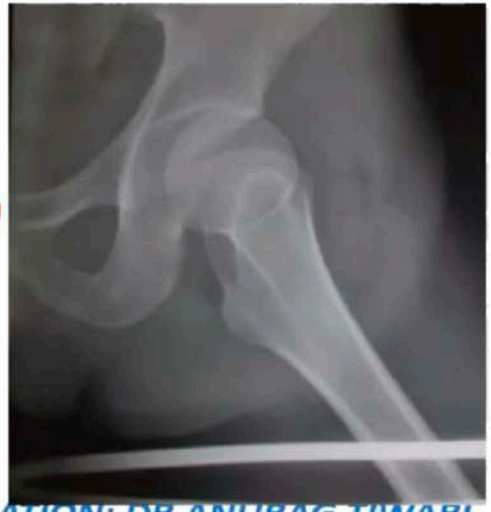
Sciatic nerve and Piriformis

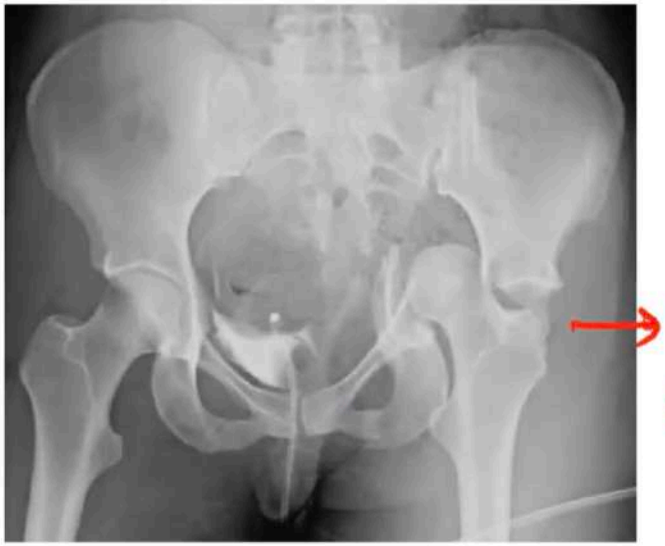


Spectrum of Hip dislocations



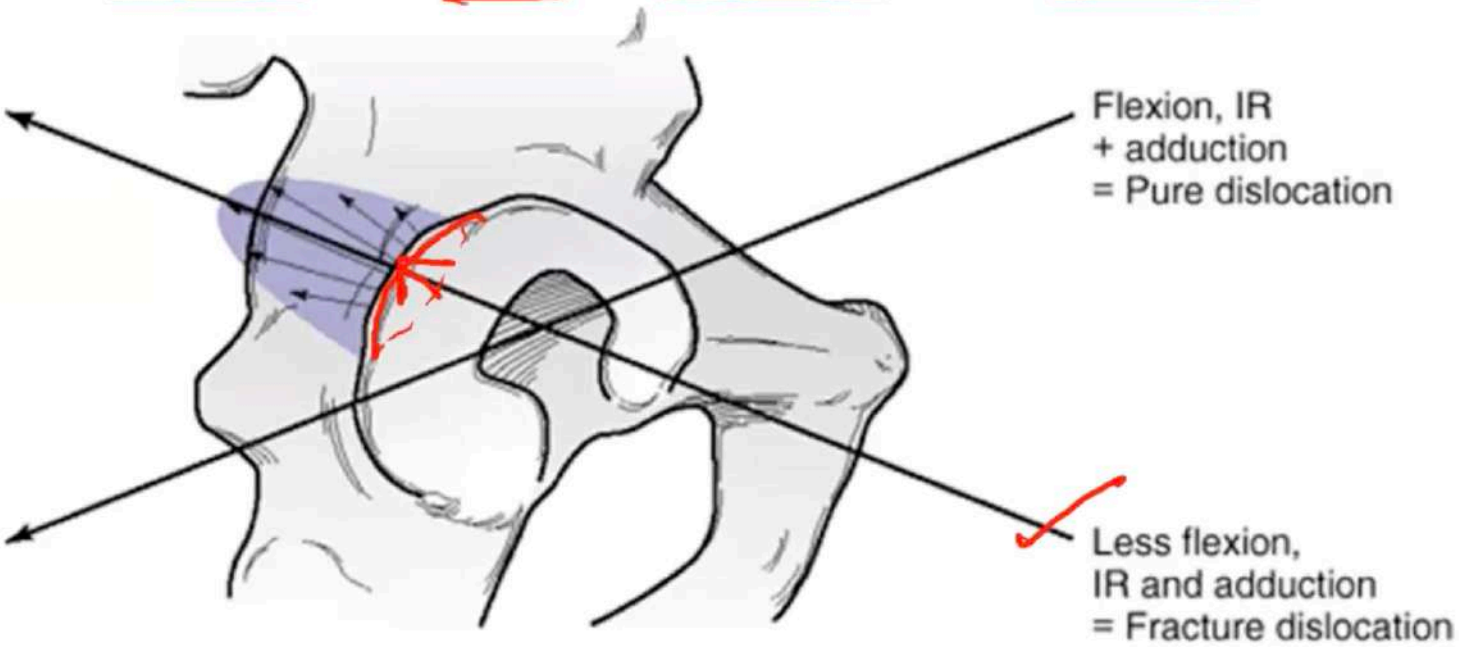






Pure dislocations Vs Fracture dislocations??

- Flexion , IR , Adduction → Pure dislocation
- Less flexion, Less IR, less adduction → # dislocation



- Anterior dislocation – Abduction and External rotation

- More flexion → Inferior type (obturator)
- Less flexion → Superior type (Pubic)

Associated injuries

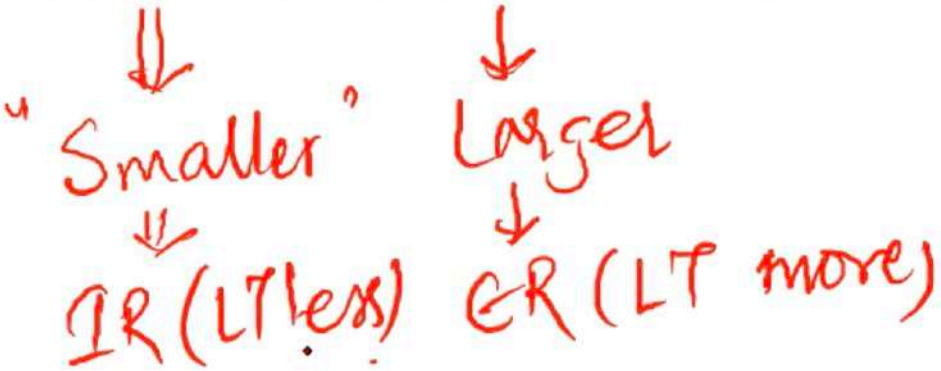
- 95 % of cases have associated injuries
- Check for – Head injury
  Chest injury
  Abdomen injury
  Knee injury – PCL / meniscus.

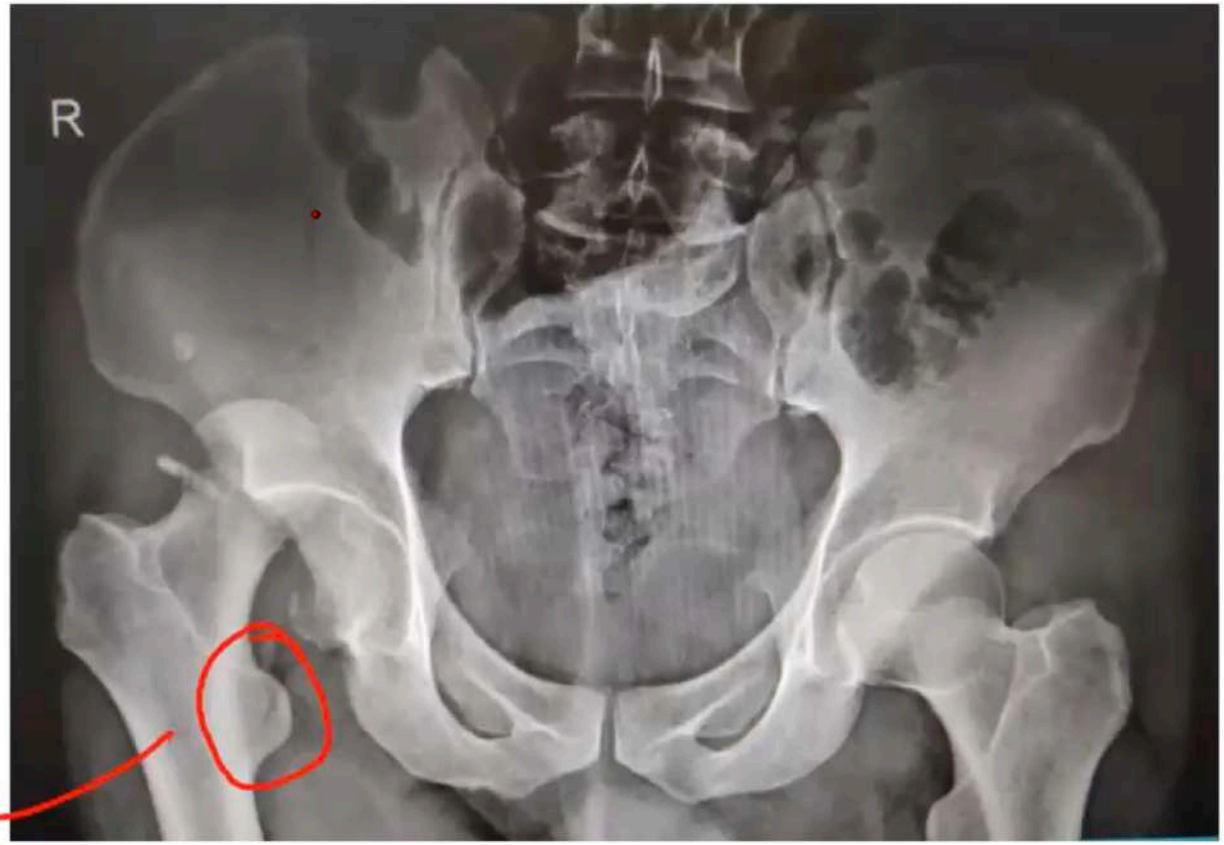
Types of Dislocation

- Posterior
- Anterior
- Central

On Xray -

- Posterior Or Anterior dislocation ??





HIP DISLOCATION: DR ANURAG TIWARI

On Xray -

- Posterior Or Anterior dislocation ??

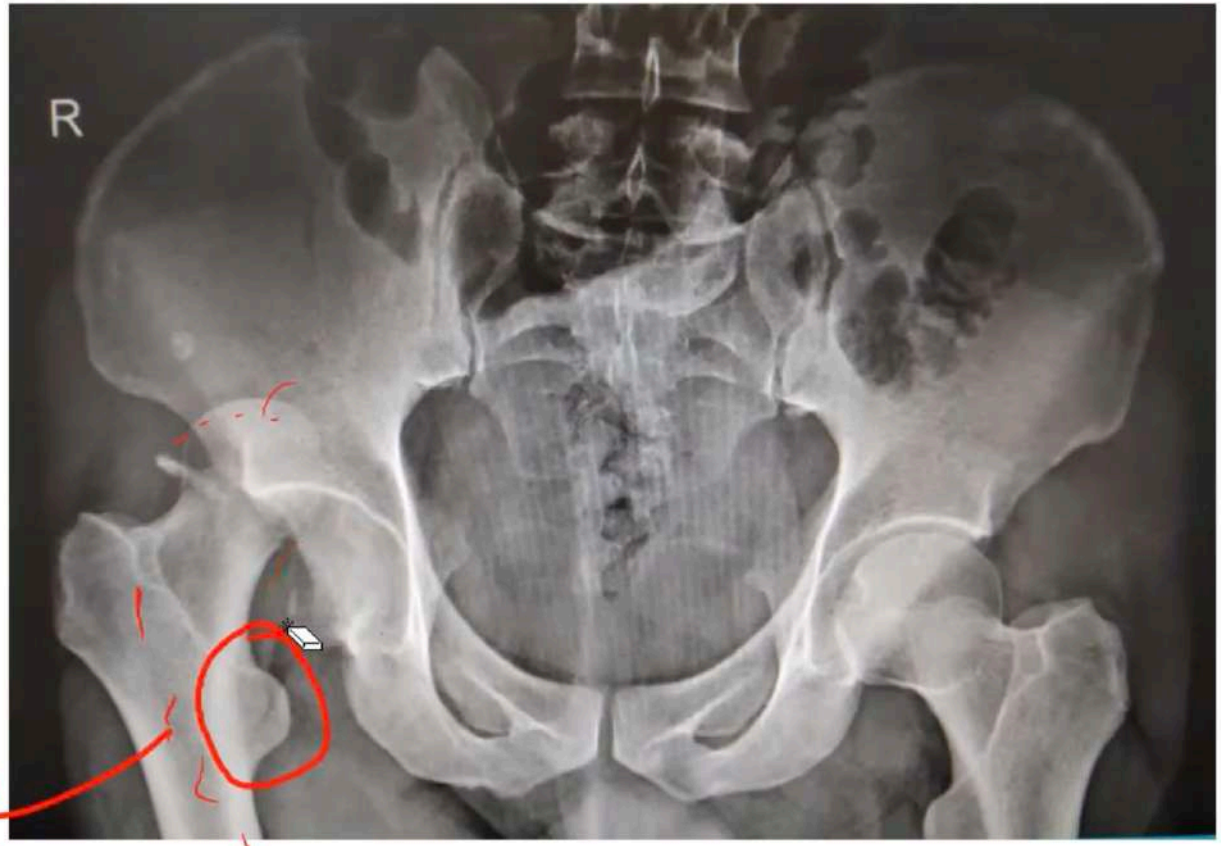
"Smaller" → IR (LT less)

Larger → ER (LT more)

AD IR → PD.

AB ER → AD.

} Pure dislocation



AD + ER

C7.

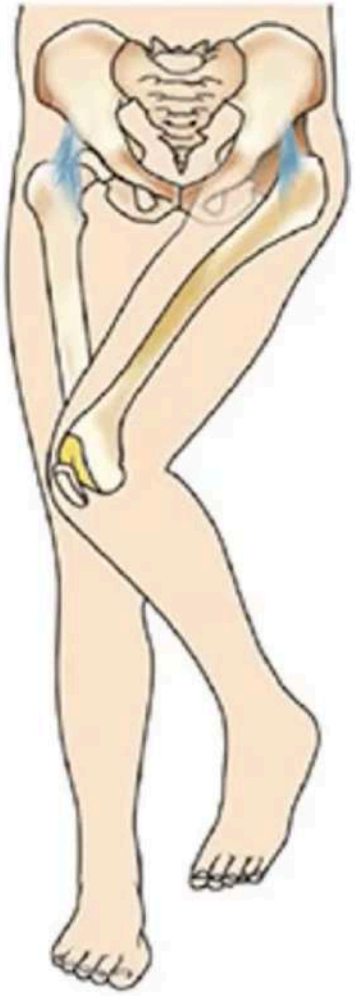
ER

Posterior Dislocation Mechanism Of Injury

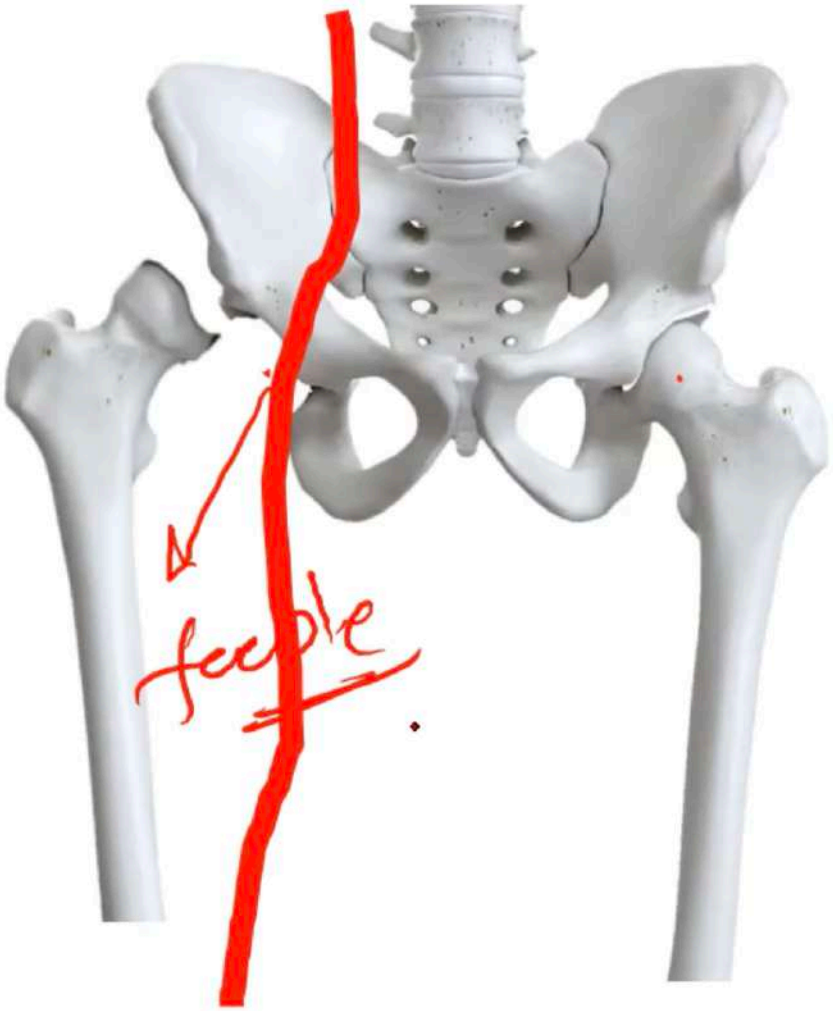
(90%)

- Dashboard injury

Clinical presentation



- Attitude of the limb- Adduction and IR
- Shortening of limb
- Palpable head of femur in Gluteal region
- Vascular sign of Narath – ~~negative~~ (feeble/ absent)
- Nerve Injury- sciatic nerve injury
- Vascular injury
- Associated injuries- Check for chest and abdomen injuries, knee injury (dashboard injury)



Vascular sign of Narath

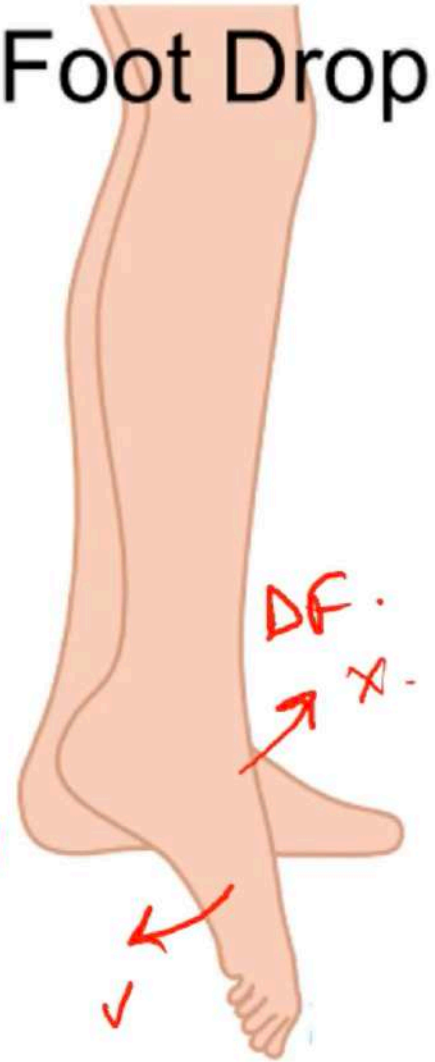
Nerve Injury

- Why Foot Drop??

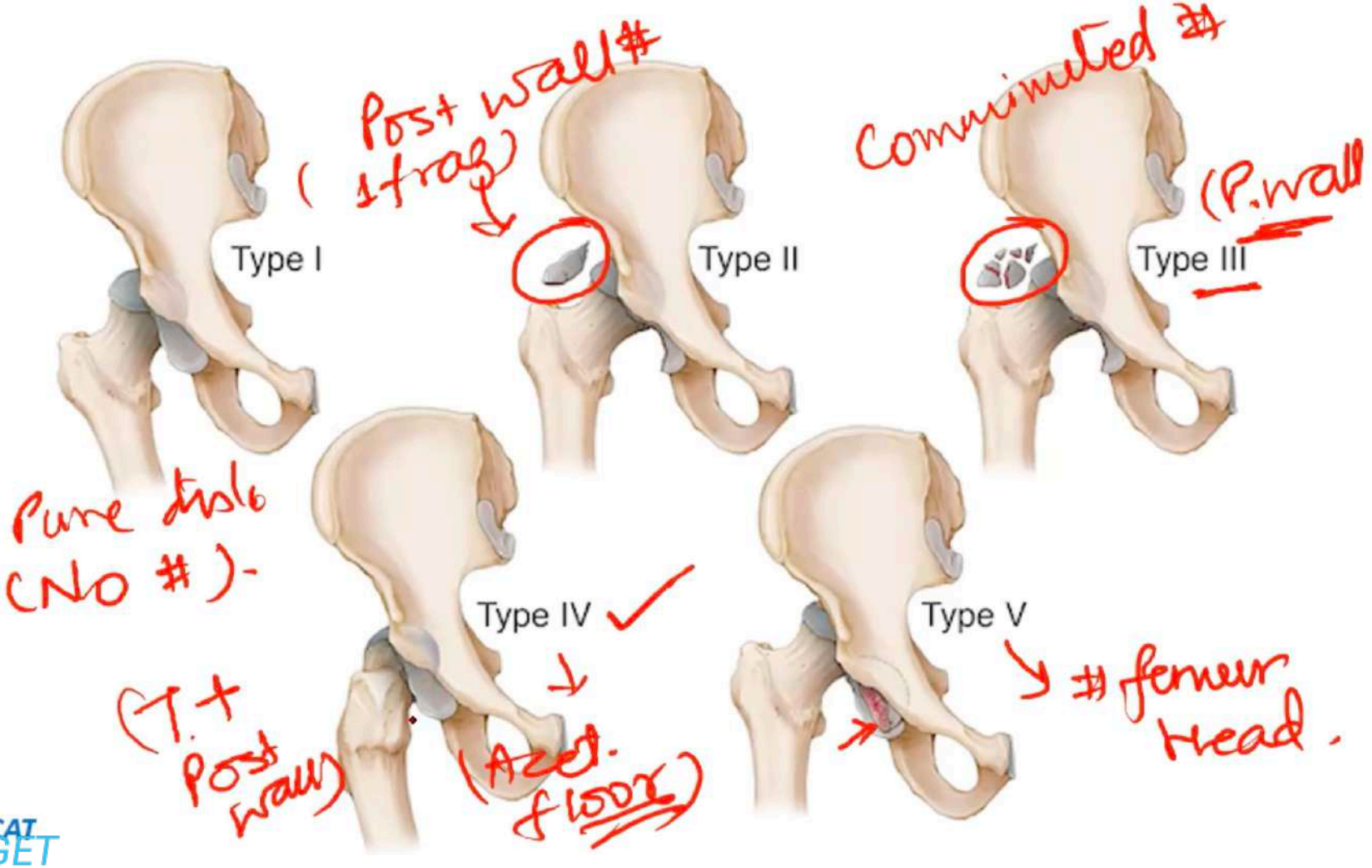
1) → CPN + TN · ⊙

2) CPN — nerve. weak.

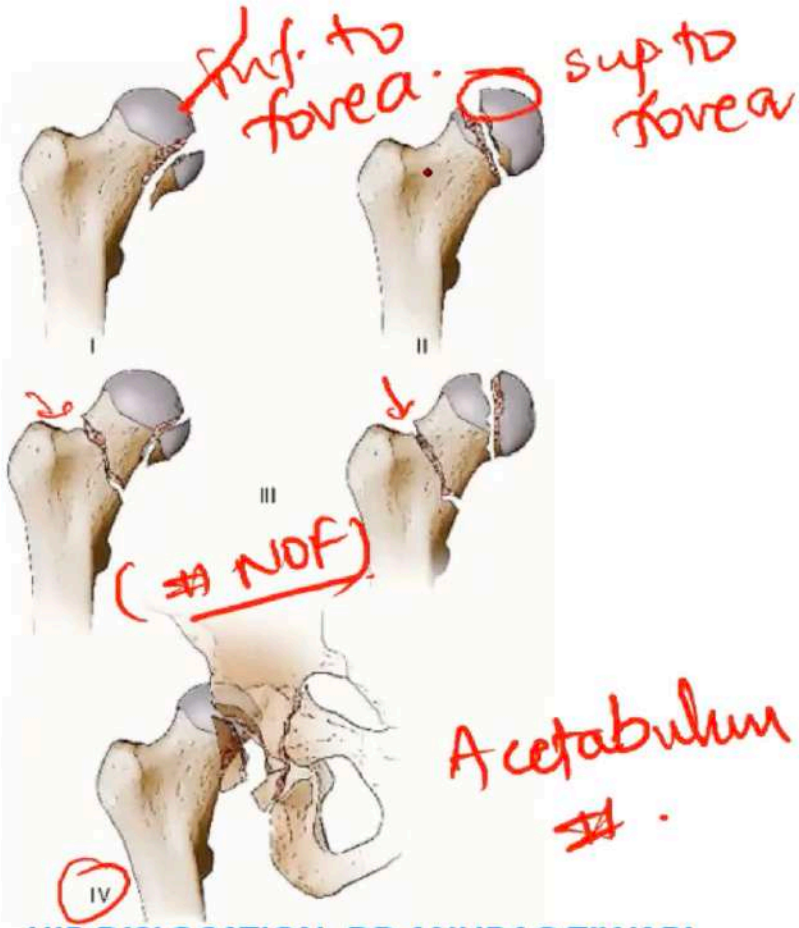
3) · (Stretch (ischemia)



Classification- Thompson and Epstein

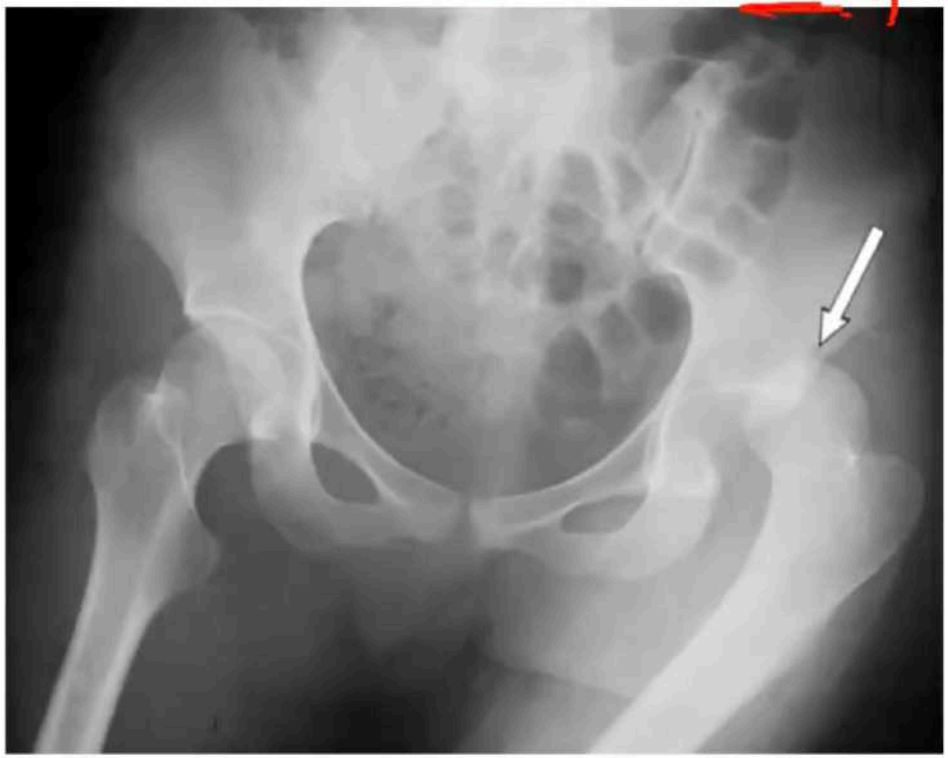


Pipkin Classification for Femur head



Xray

Pelvis & B/L Hip.



- Pre reduction – Single AP view is sufficient
- Loss of congruency
- Small head size
- Shenton's line broken
- Lesser trochanter less prominent → IR femur
- Adduction
- Fragment in the joint
- Head #
- Neck #

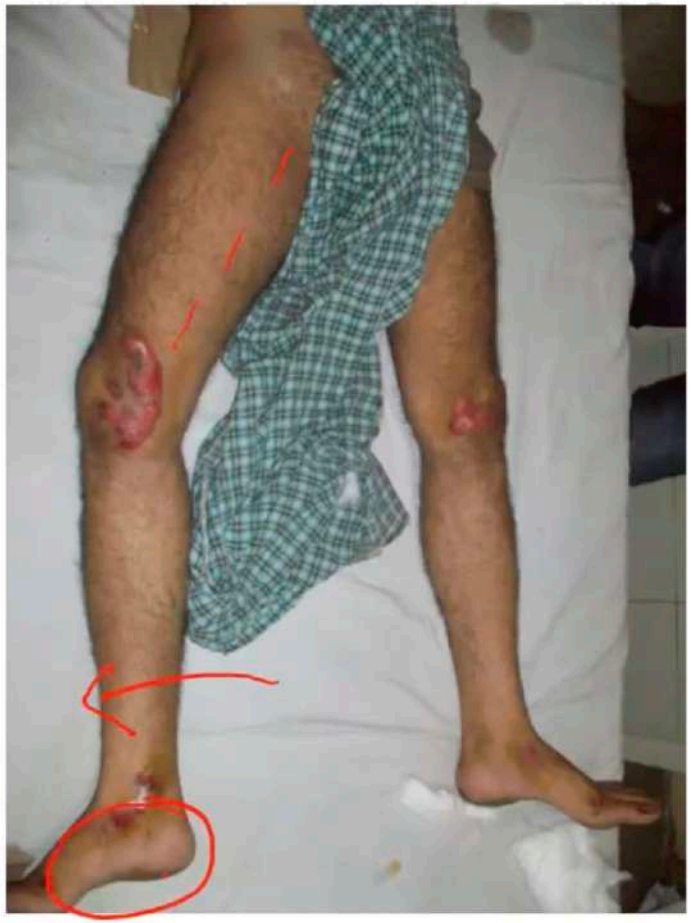
- Post reduction – 5 views are must- AP, Inlet , Outlet, 2 Judet views

Anterior Dislocation - Mechanism

- Abduction and External rotation injury

Clinical presentation

- Abduction and External rotation
- Shortening
- Femoral vessel / Femoral nerve injury



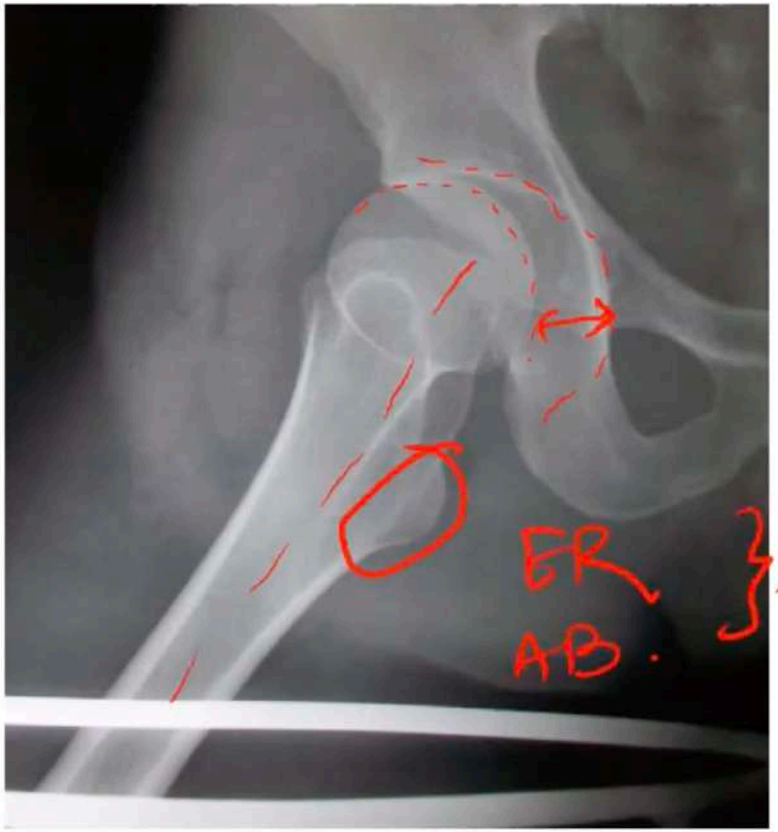
Epstein classification

- Type I- Superior dislocation (pubic)

Type I Type II

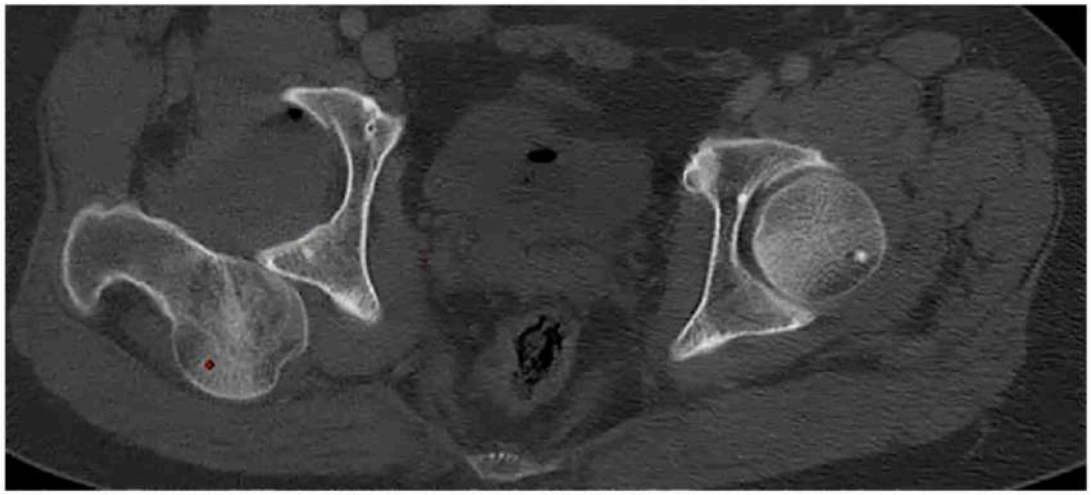
- Type II- Inferior dislocation (obturator)

Xray



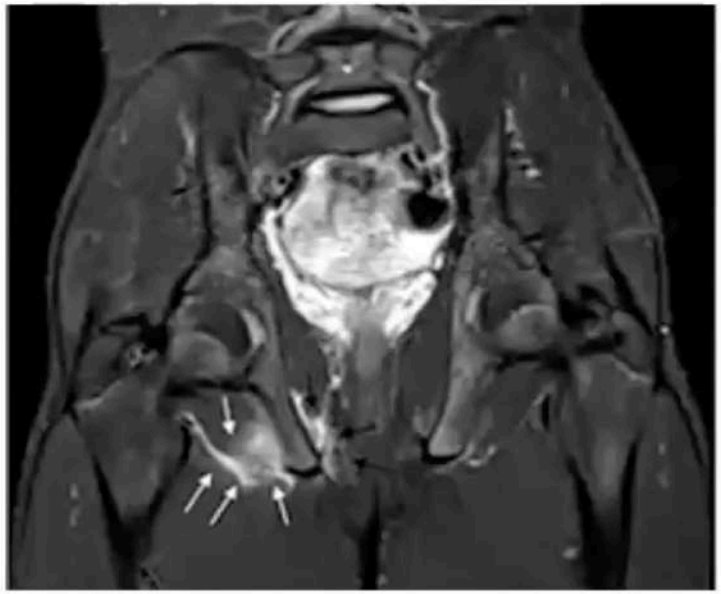
CT post reduction

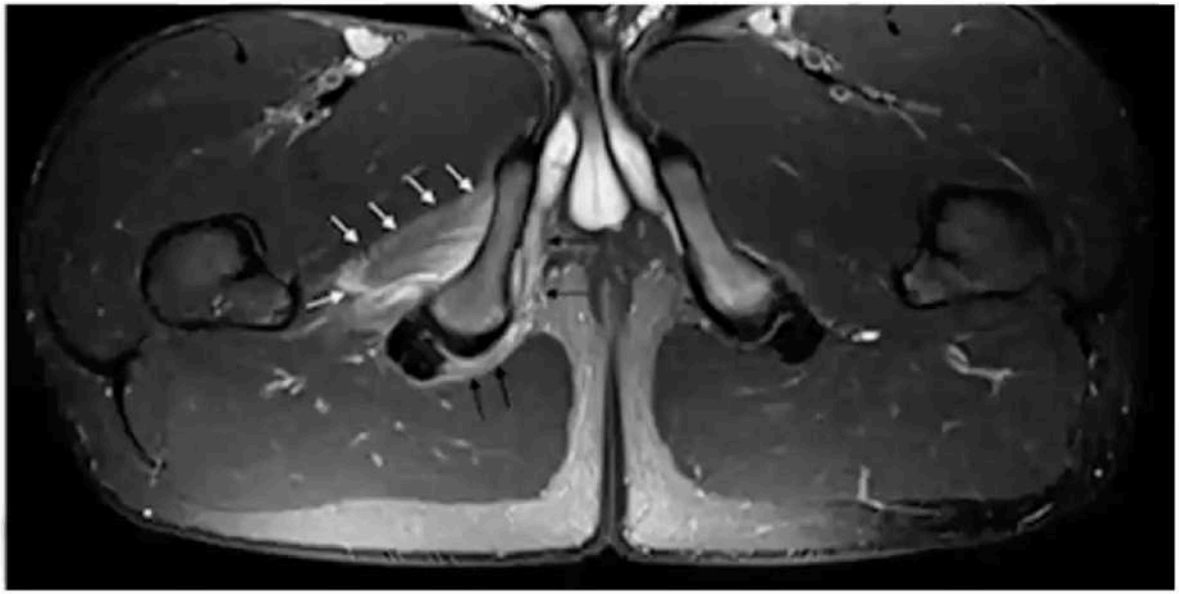
- Congruent reduction
- Intra articular fragments
- Femoral head #
- Acetabular #



Role of MRI

- AVN is seen at 6-8 weeks.
- Predicting AVN in acute dislocation- if Obturator externus is injured- More chances of AVN





Management

- Immediate Close reduction .

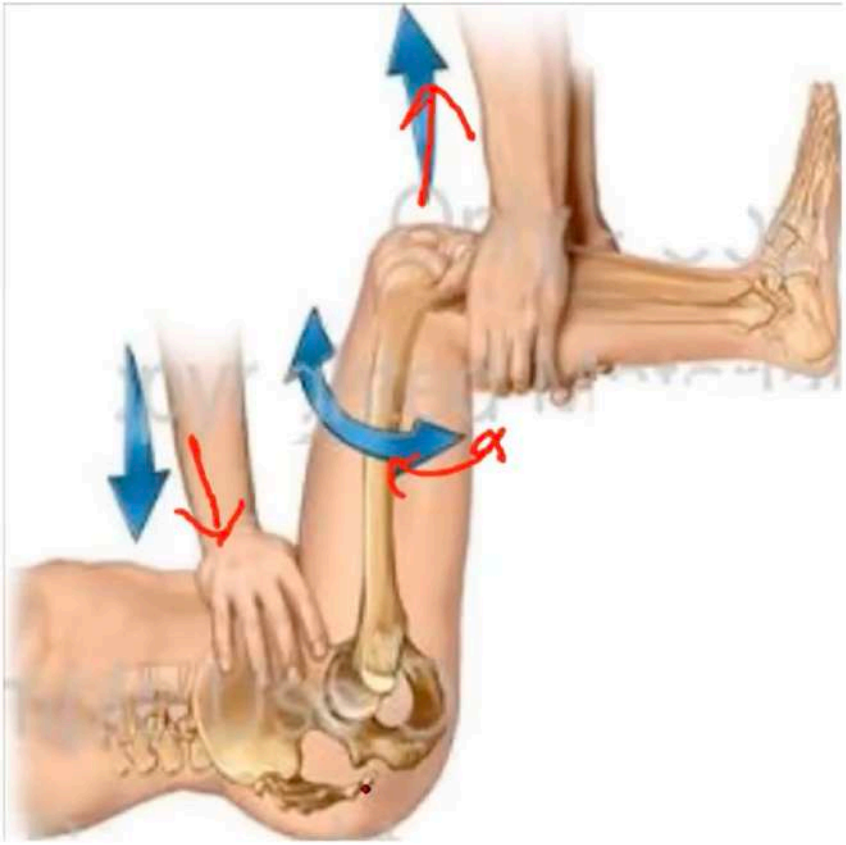
Reduction techniques

- Stimson method
- Allis
  Walker modification
- Bigelow
- East Baltimore lift
- Rochester

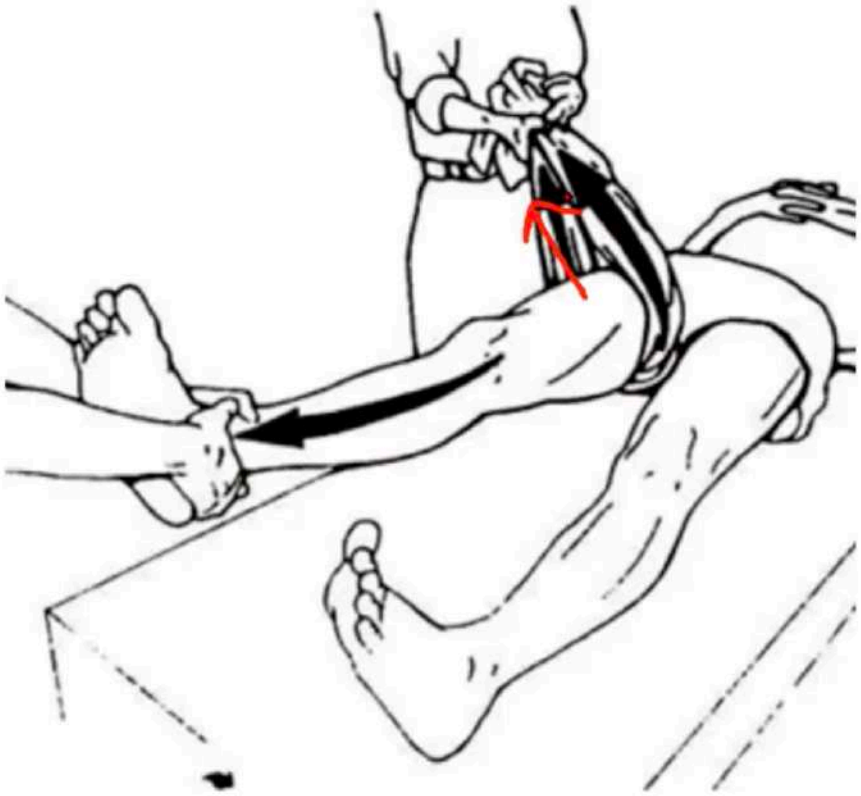
Mn: SABER

- Use continuous traction and gentle manipulation instead of sudden jerky movements

Allis Manuever



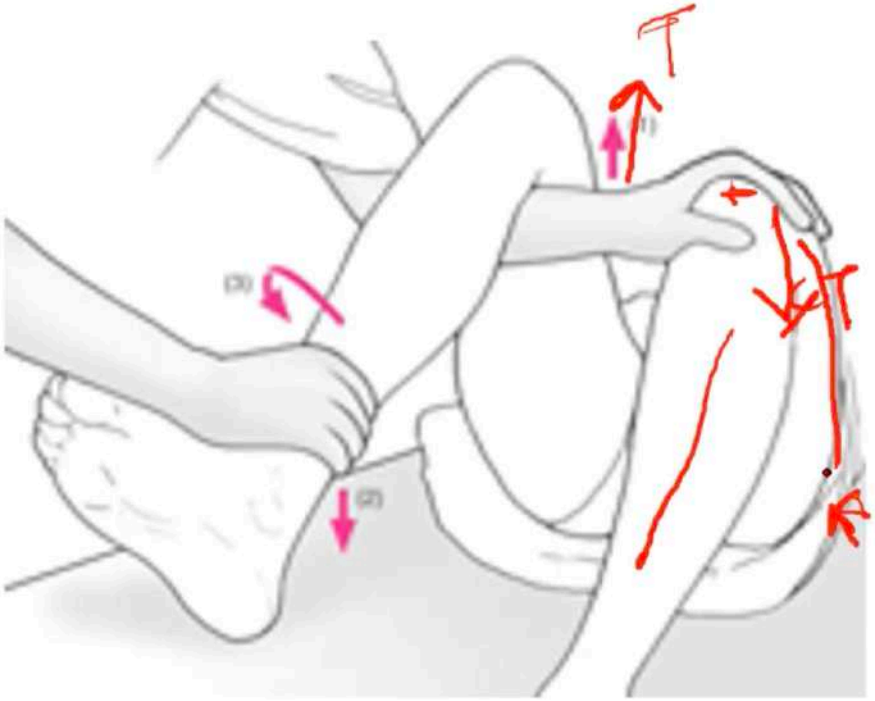
Wlaker modification of Allis method for anterior dislocation



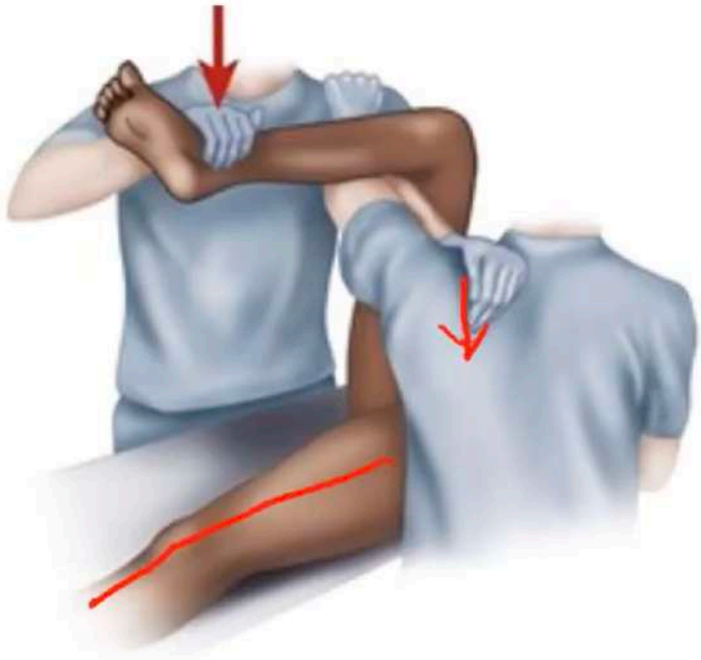
Bigelow method

- Same as Allis → Traction
- Traction in Adduction and IR → Then Abduction and External rotation.

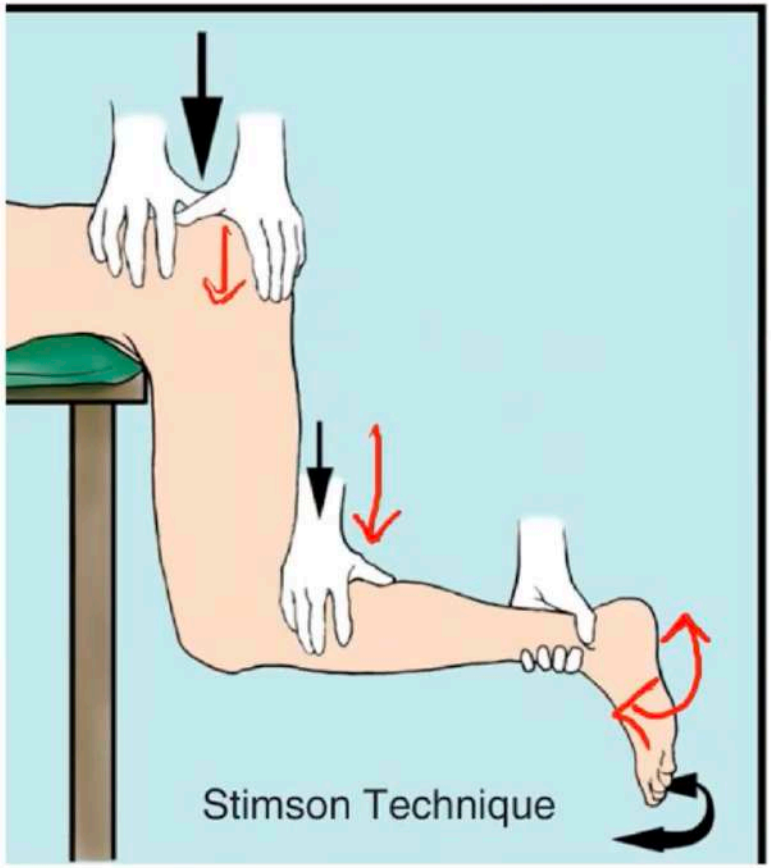
Rochester method



East Baltimore



Stimson method



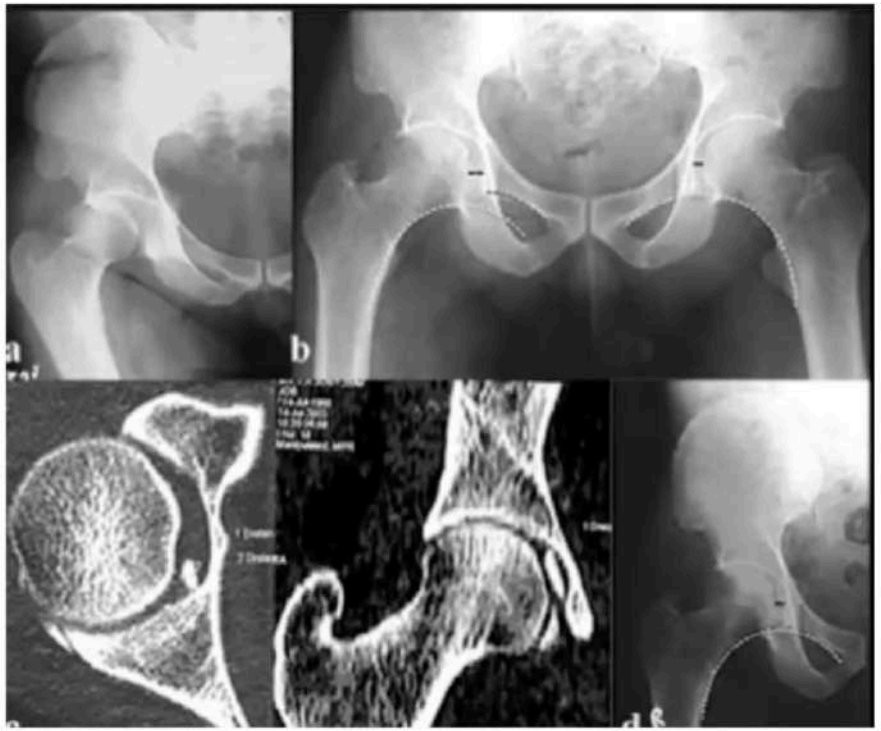
Open Reduction

- Indications -

"2 attempts"

- Irreducible dislocation (Close reduction failed)
- Unstable after CR
- Intraarticular fragment post reduction
- Fracture of femur head
- Iatrogenic Sciatic nerve palsy

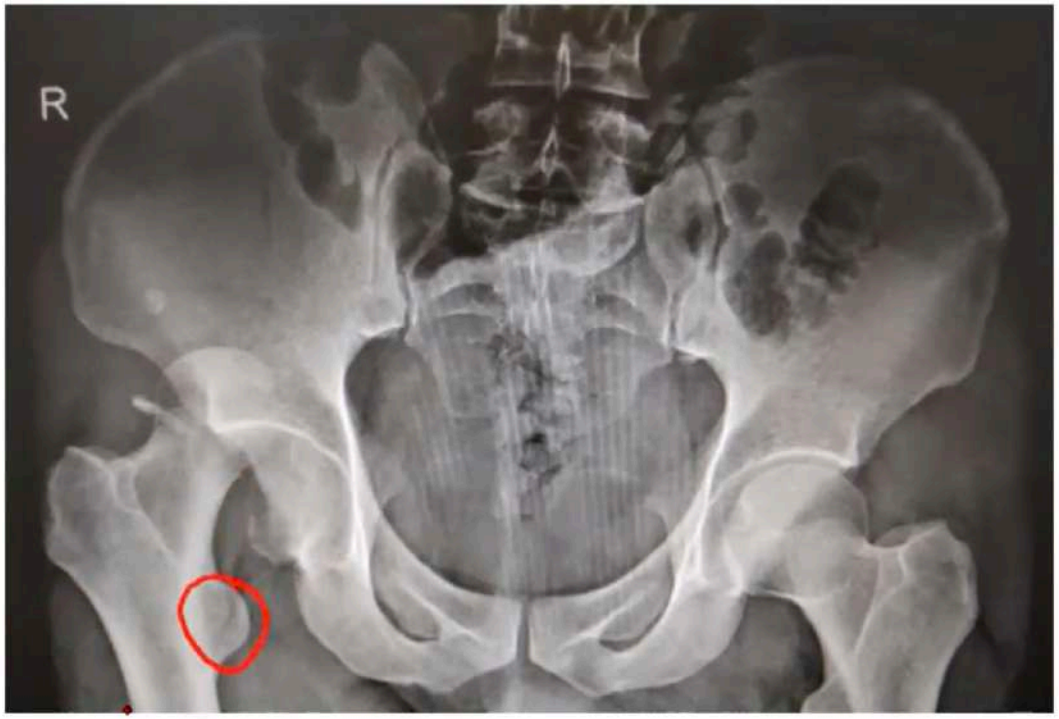
- Small intraarticular fragment- left as such
- Large fragment rubbing the articular surface – needs removal



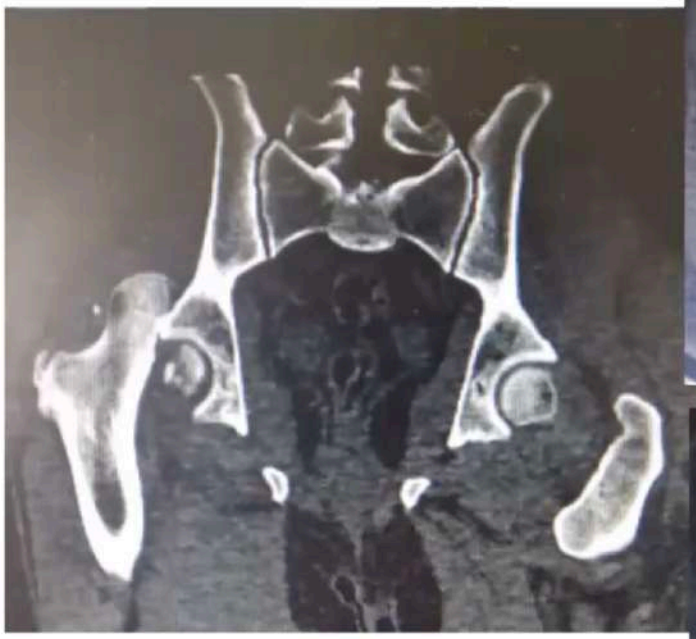
Approach for OR

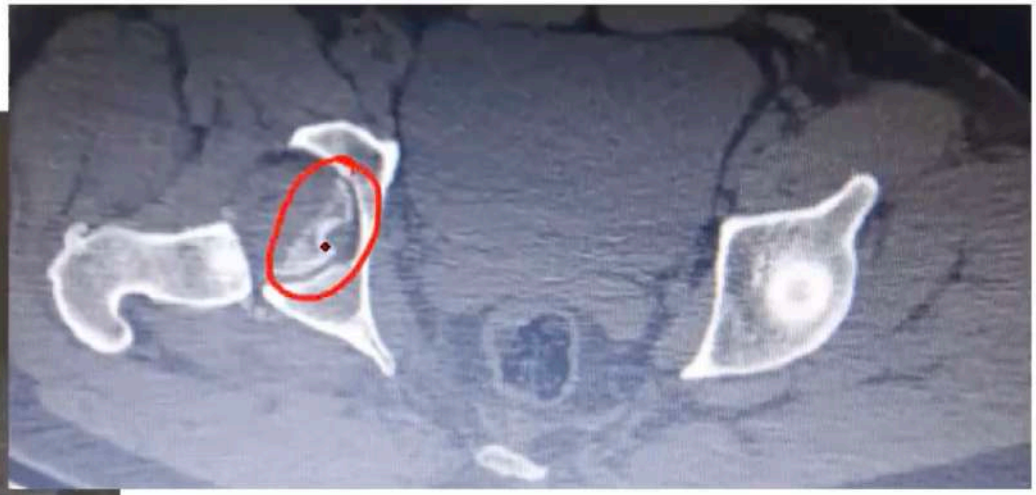
- Anterior dislocation – Anterior approach (Smith Peterson)
- Posterior dislocation – prefer Surgical Safe dislocation by Ganz
- If posterior wall # fixation – Kocher Langenbeck
- If Head #- Surgical safe dislocation

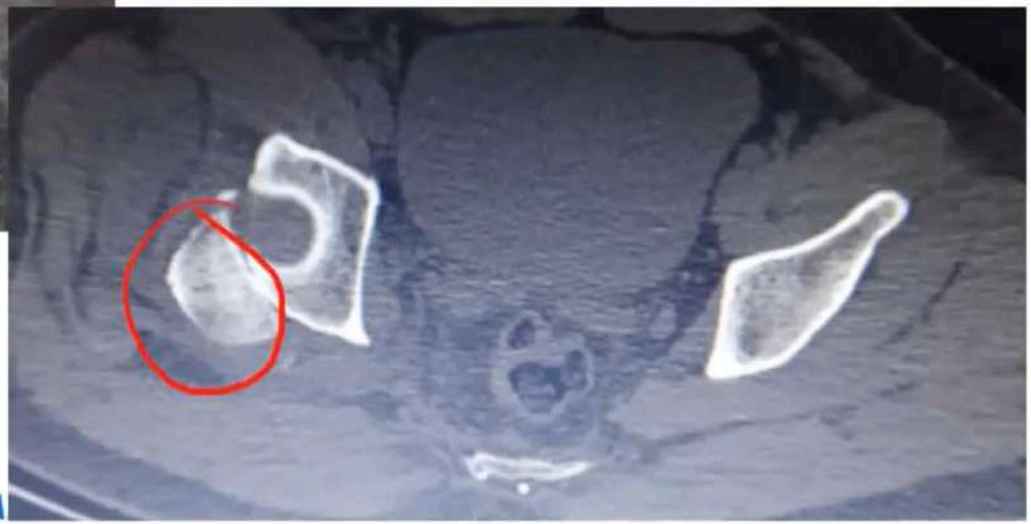
Case example



Posterior







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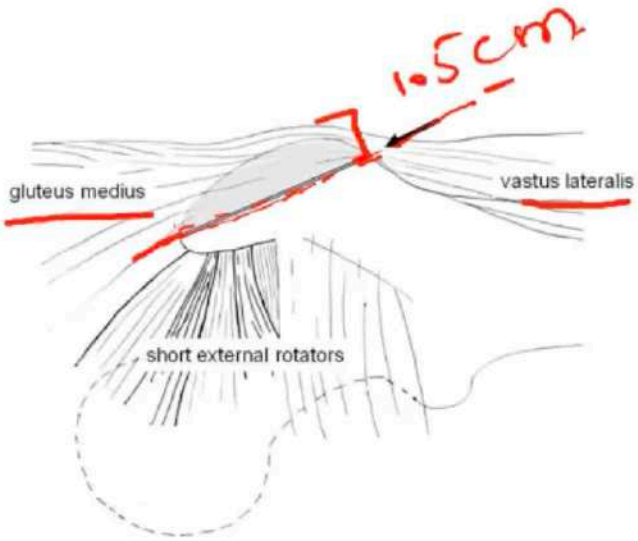

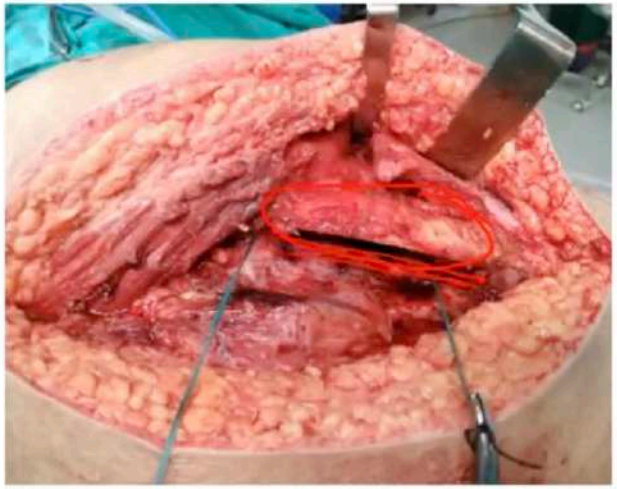

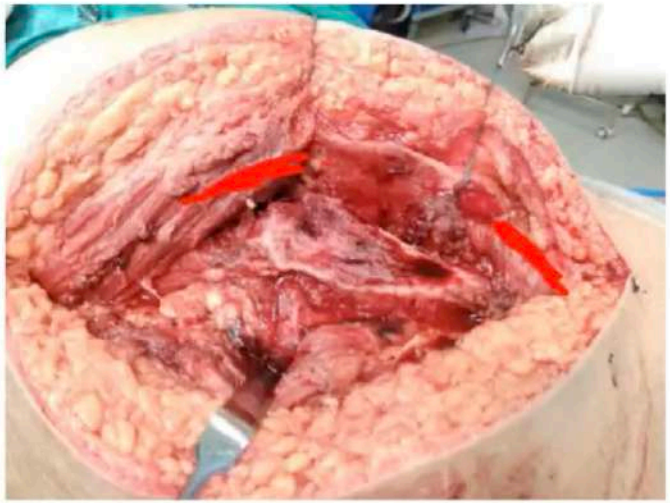

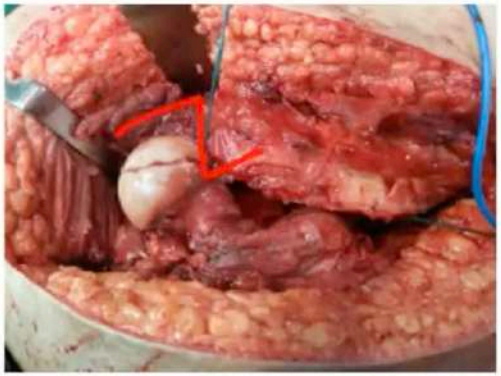

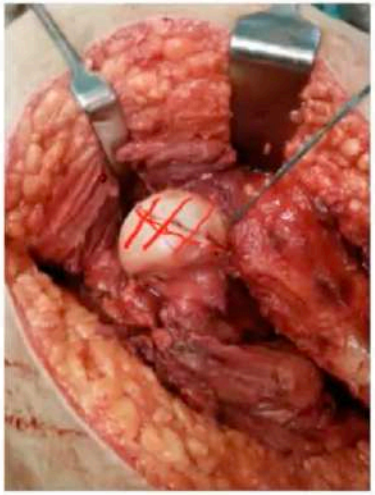

HIP DISLOCATION: DR ANURAG TIWARI

Complications

- Early
- Sciatic nerve injury → CPN ↓ foot drop. / Tendon transfer.
- Femoral nerve injury } anterior.
- Femoral vessels injury

- Late
- AVN → (>6 hours)
- HO → OR > CR → Ant. >> Posterior.
- OA →
- Instability