

Common Pediatric Hip Problems

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Common Pediatric Hip problems:

➤ **DDH**

➤ **SCFE**

➤ **Perthes**

Normal pelvis

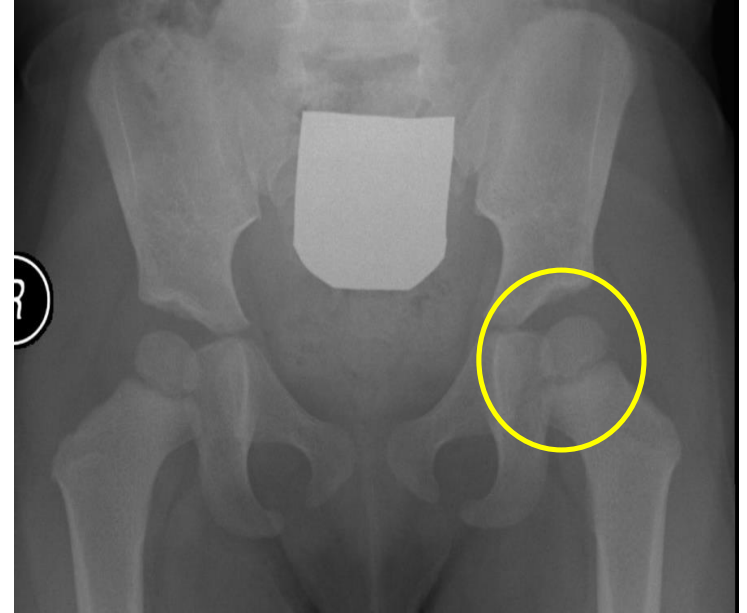


ADULT

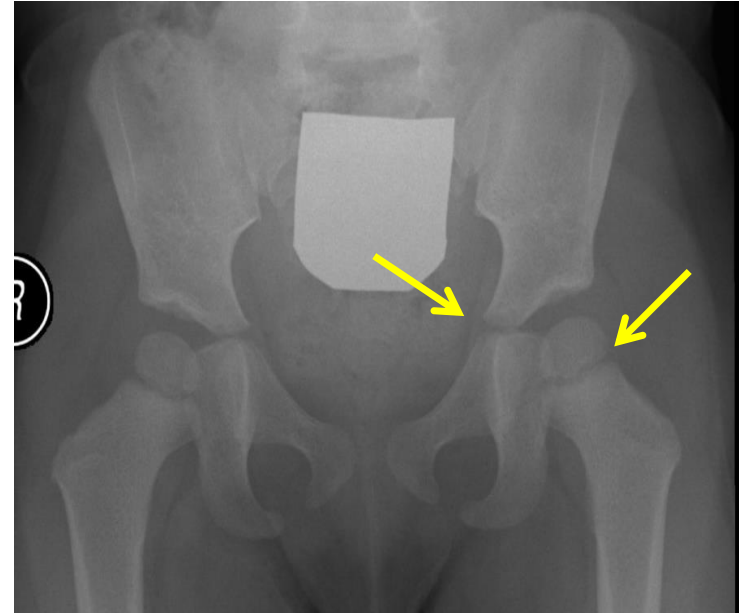


CHILD

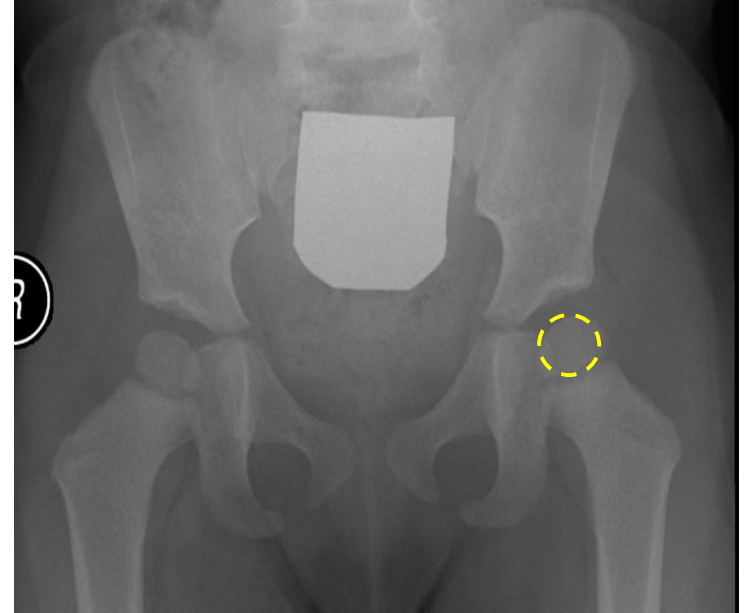
Normal pelvis



Normal pelvis



Normal pelvis



DDH

Normal hip

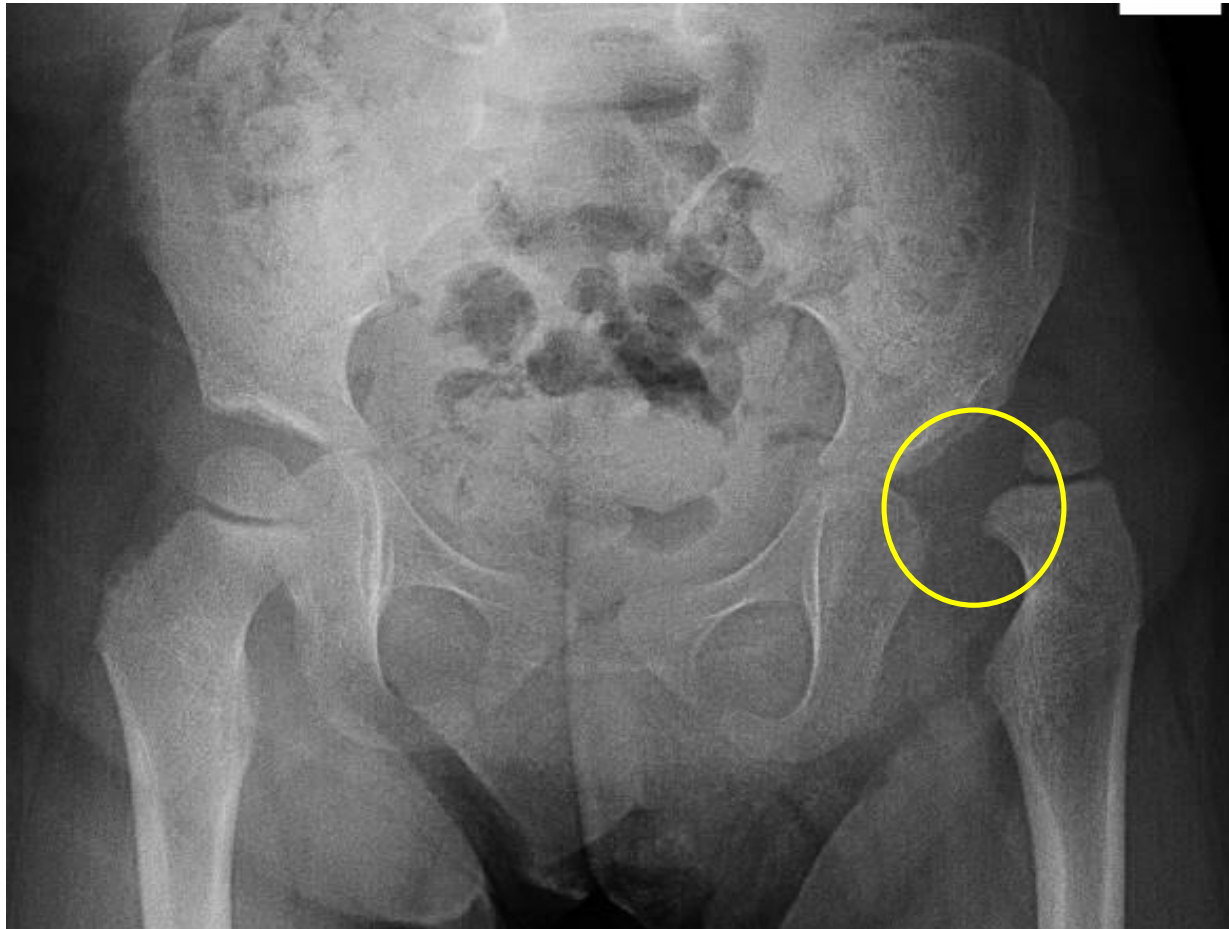
Dislocated hip



DDH

Normal hip

Dislocated hip

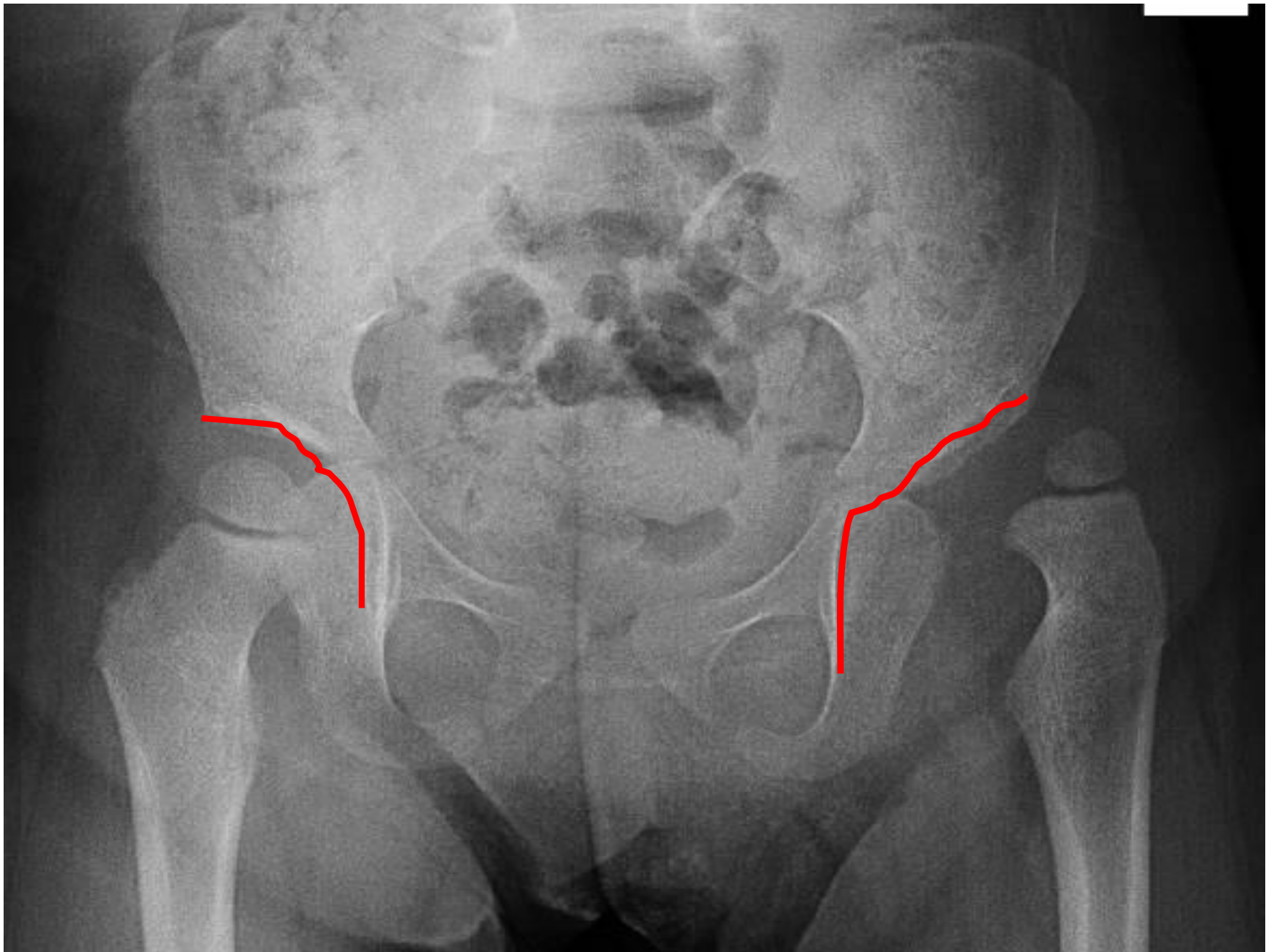


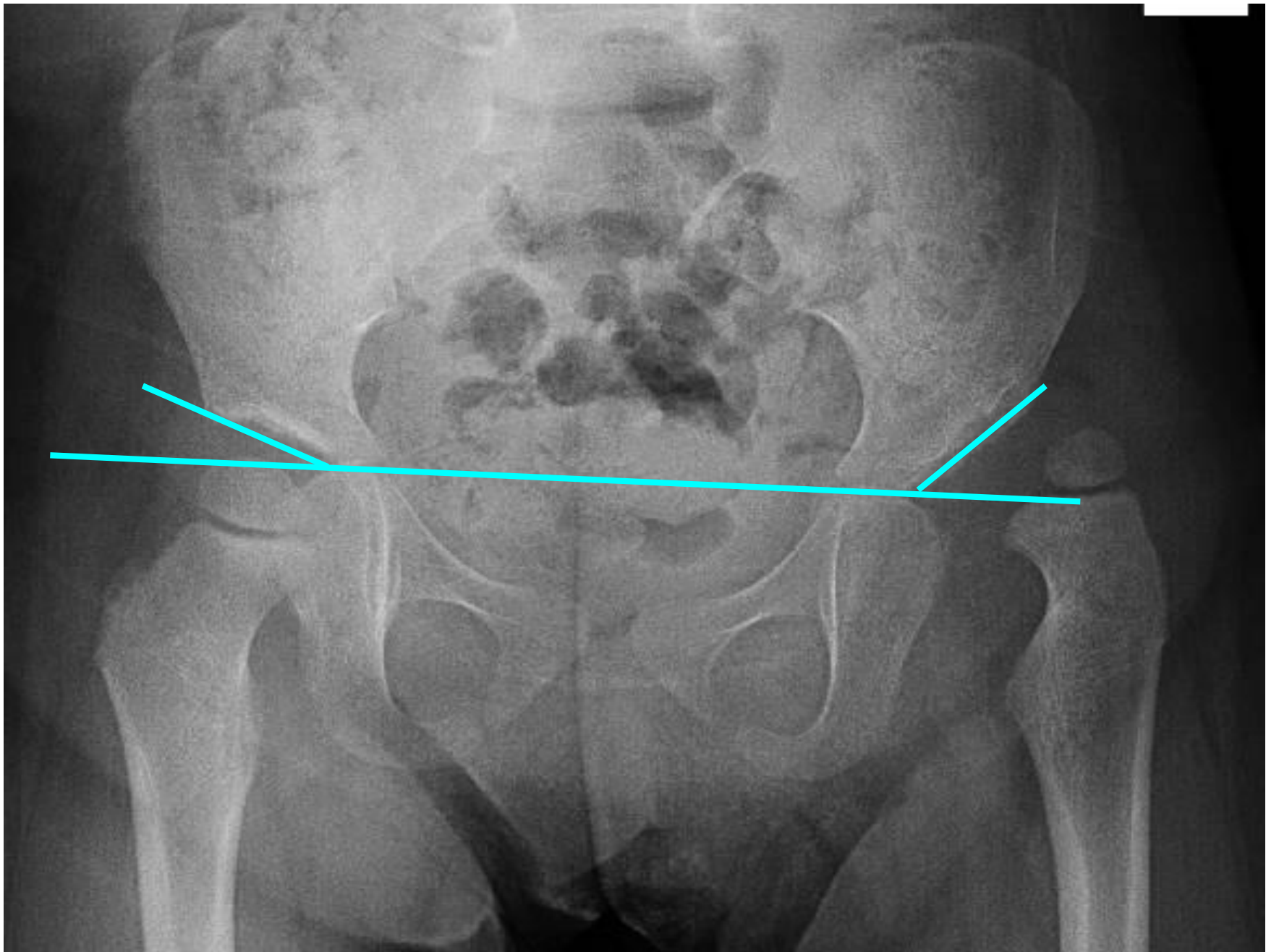
Nomenclature

- **CDH** : Congenital Dislocation of the Hip
- **DDH** : Developmental Dysplasia of the Hip

Patterns of disease

- Dislocated
- Dislocatable
- Subluxated
- Acetabular dysplasia





Causes (multi factorial)

- Hormonal
 - Relaxin, oxytocin
- Familial
 - Lig.laxity diseases
- Genetics
 - Female 4 X male --- twins 40%
- Mechanical
 - Pre natal
 - Post natal

Unknown

Mechanical causes

- Pre natal
 - Breach , oligohydrominus , primigravida , twins
 - (torticollis , metatarsus adductus)
- Post natal
 - Swaddling , strapping



Infants at risk

who?

- Positive family history: 10X
- A baby girl: 4-6 X
- Breech presentation: 5-10 X
- Torticollis: CDH in 10-20% of cases
- Foot deformities:
 - Calcaneo-valgus and metatarsus adductus
- Knee deformities:
 - hyperextension and dislocation

Infants at risk

When risk factors are present

- The infant should be reviewed
 - Clinically
 - radiologically

Clinical examination

- The infant should be
 - quiet
 - comfortable

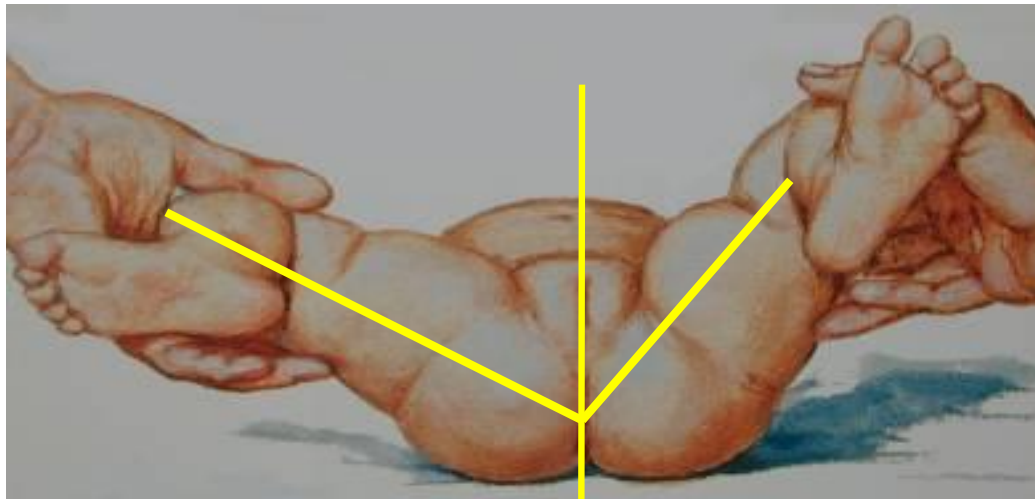


- **Look:**
 - External rotation
 - Lateralized contour
 - Shortening
 - Asymmetrical skin folds
 - Anterior – posterior





- **Move**
 - Limited abduction in flexion



- **Special test**

- Galiazzi

- Ortolani , Barlow test

- Trendelenburgh sign

- Limping (waddling gait if bilateral)

Special test

Galiazzi test



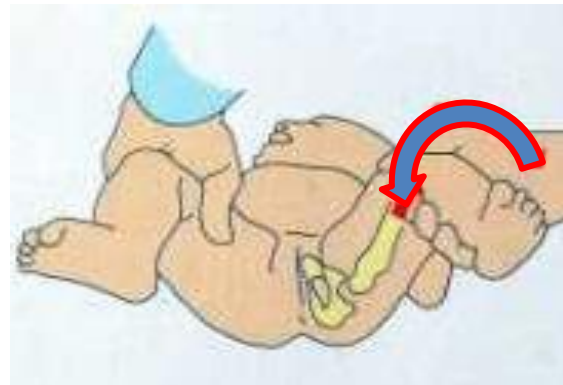
Special test

Ortolani test



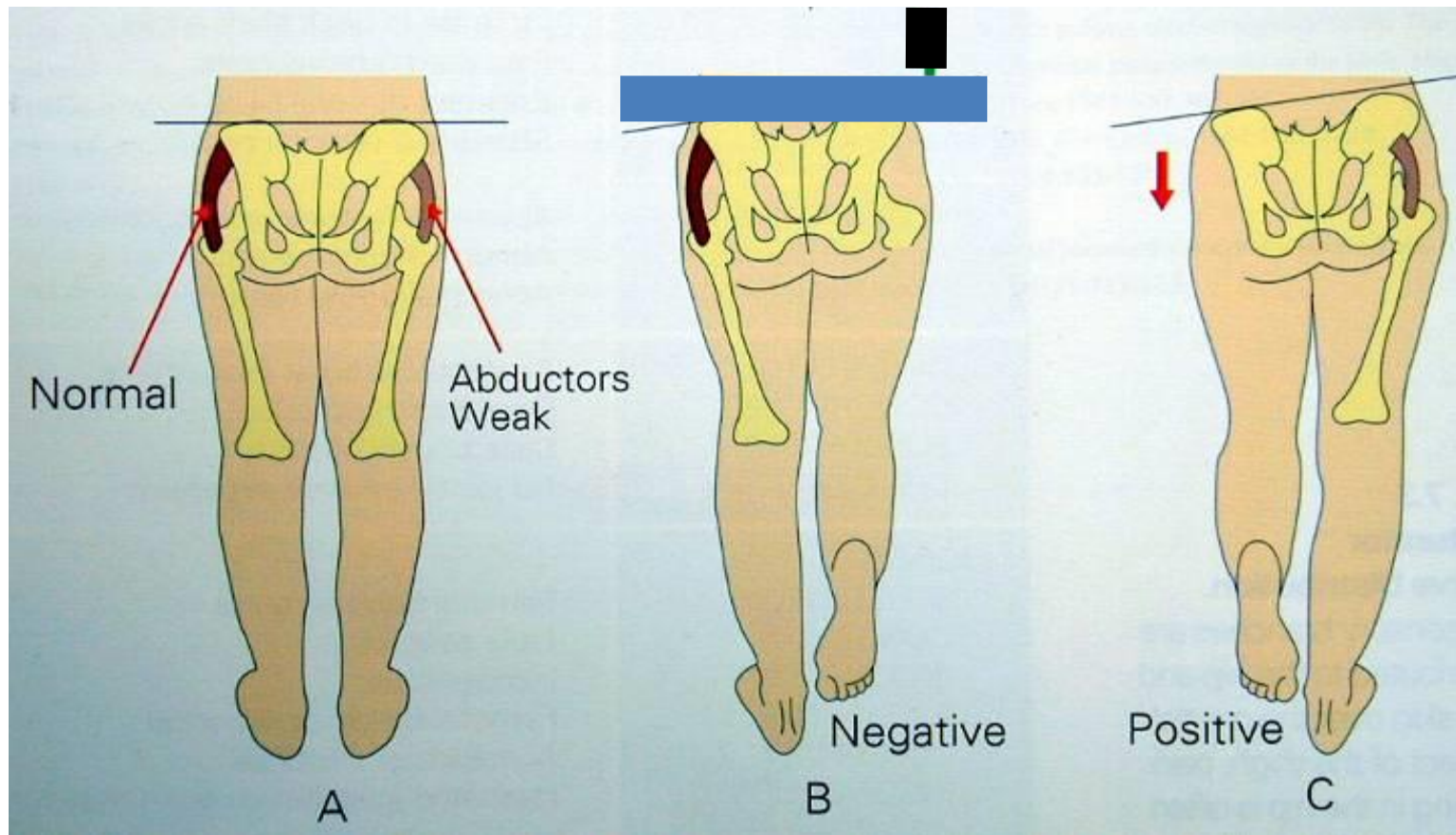
Special test

Barlow test



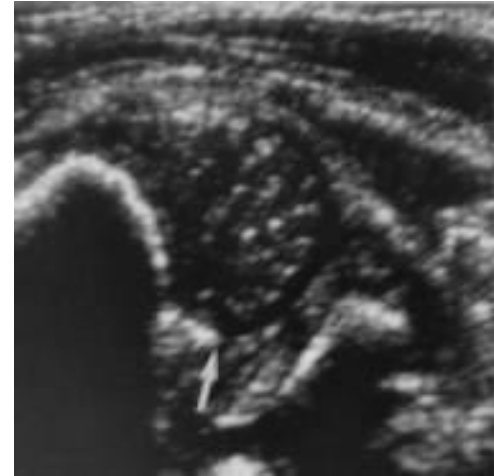
Special test

Trendelenburgh sign



Investigations

- 0-3 months U/S
- > 3months X-ray pelvis AP + abduction



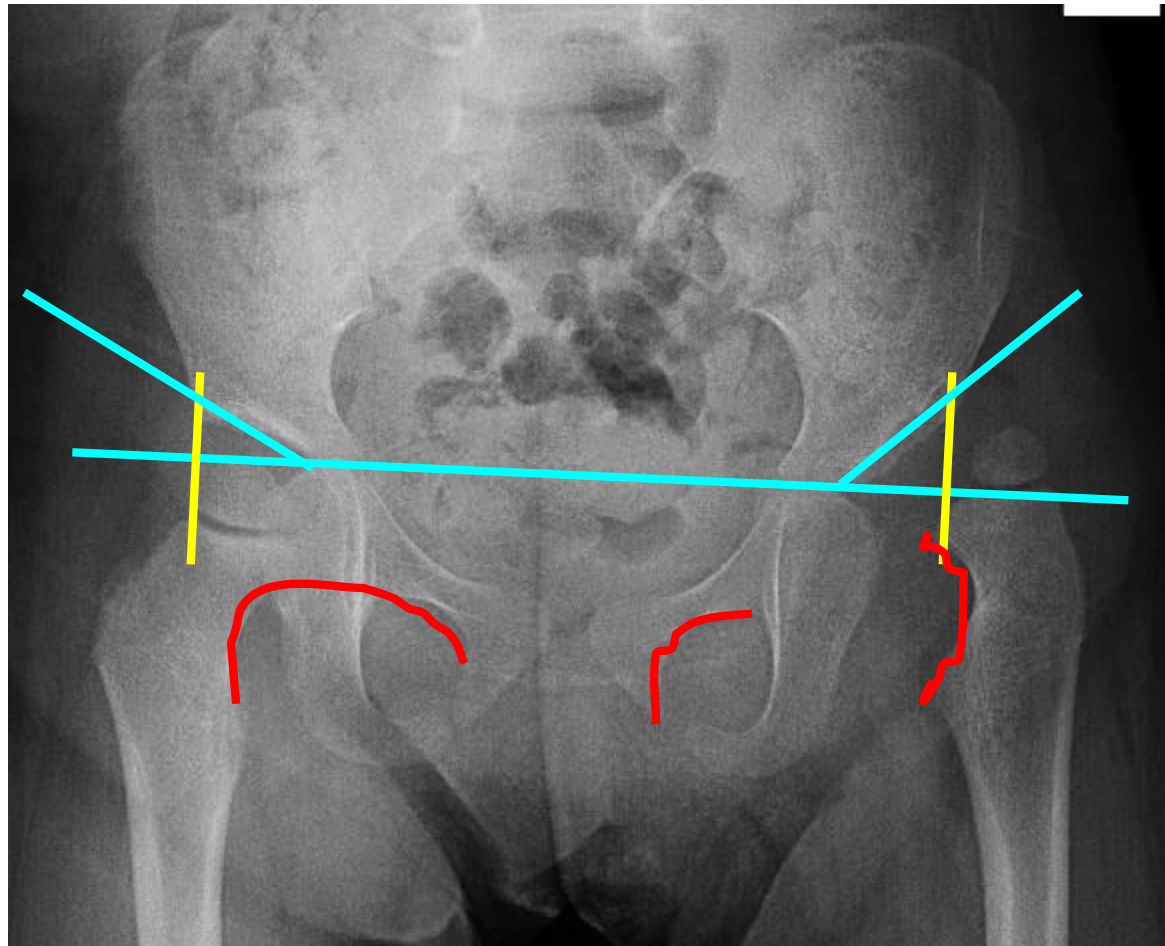
Radiology

- After 6 months: reliable



Radiology

- After 6 months: reliable



Treatment Goal

- Obtain concentric reduction
- Maintain concentric reduction
- In a non-traumatic fashion
- Without disrupting the blood supply to femoral head

Way:

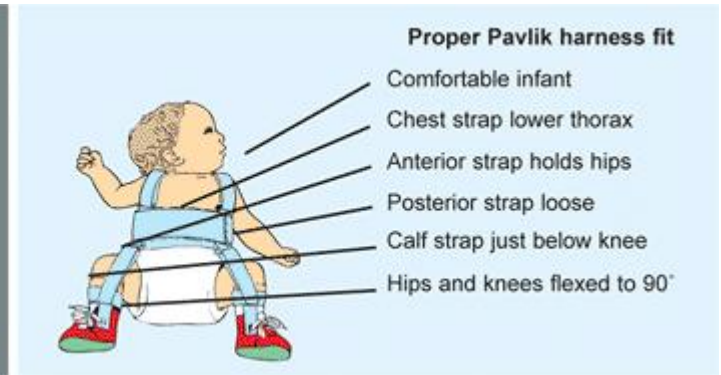
Refer to pediatric orthopedic clinic

Treatment Methods

- Depend on age
- The earlier started, the easier it is
- The earlier started, the better the results are

Treatment Methods

- Birth to 6 months
 - Pavlik Harness
 - CR under GA + Hip Spica



- 6 to 12 months
 - CR under GA + Hip Spica
 - OR



Treatment Methods

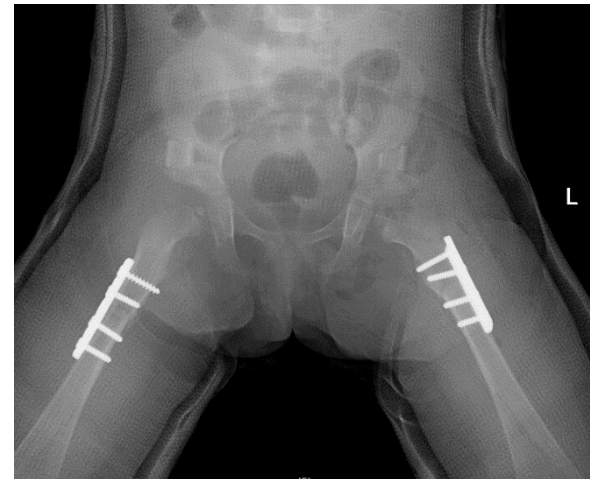
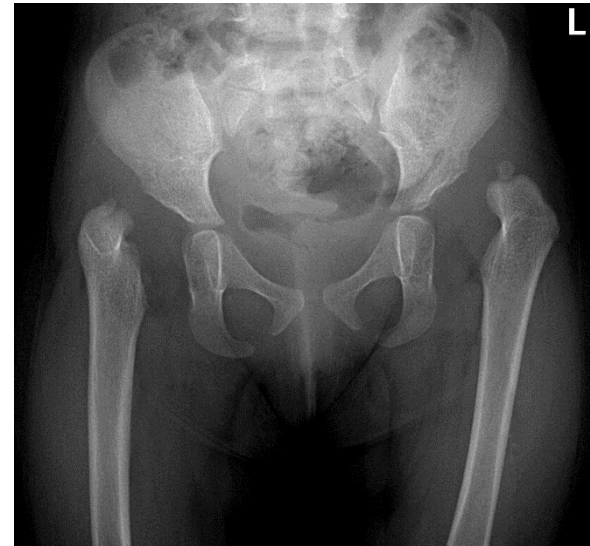
- 12 to 18 months
 - OR
- 18 to 24 months
 - OR + Acetabuloplasty



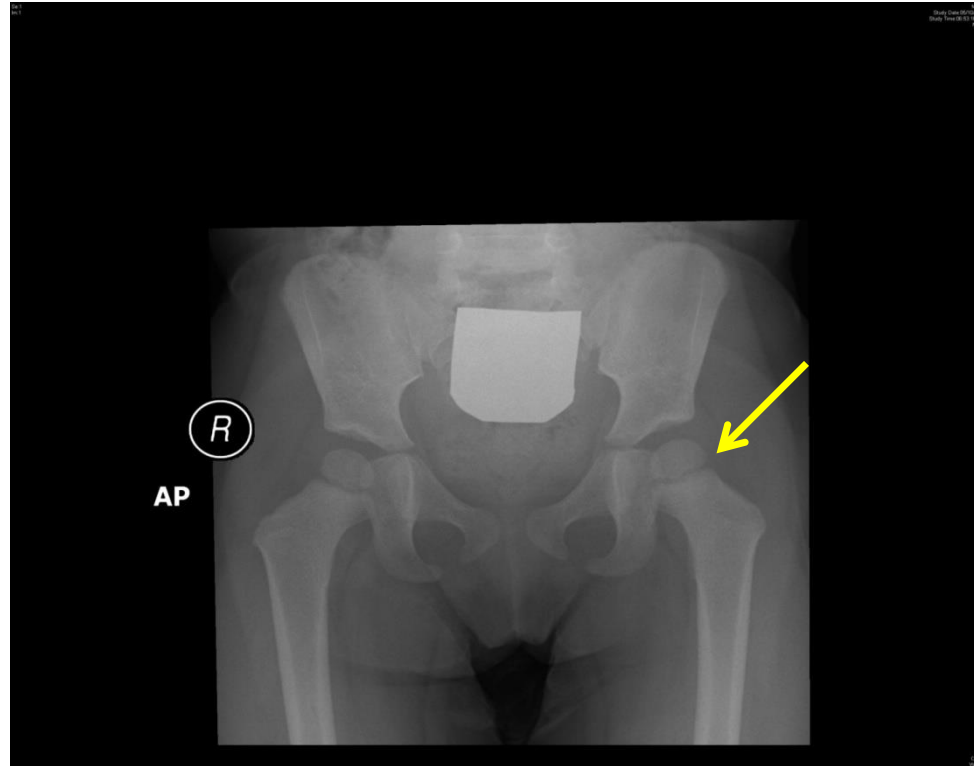


Treatment Methods

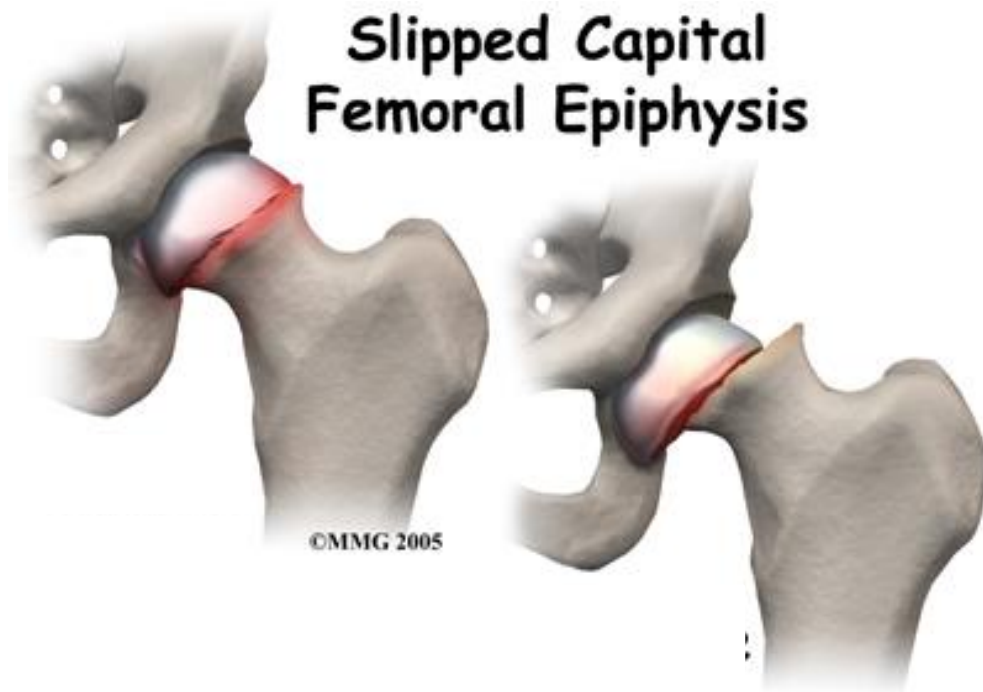
- 2 to 8 years
 - OR
 - Acetabuloplasty
 - Femoral shortening
- Above 8 years
 - Leave alone
 - OR, specific Acetabuloplasty and femoral shortening



SCFE



Slipped Capital Femoral Epiphysis



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SCFE:

- **Slipped Capital Femoral Epiphysis**
Where → at level of growth plate

Why →

- ? Hormonal
- ? Metabolic
- ? Mechanical, obesity
- ? Trauma
- ? Unknown

SCFE:

- Typical :
 - > 8-12
 - > ↑ in males
 - > ↑ in obese
 - > ↑ in black
 - > ↑ if other side affected
- History:
 - > Hip pain/knee pain
 - > Minor trauma
 - > no trauma
 - > Limping (painful)

On Examination:

- Hip in ER (external rotation)
- ↓ IR (internal rotation)
- ↓ Abduction
- Usually painful ROM
- Limping (painful)

Radiology:

➤ X-ray

- . Pelvis – slippage positive or
↑ ↑ growth plate space
[pre slip phase]

- . Knee

➤ If not clear but still doubtful MRI can help



Treatment:

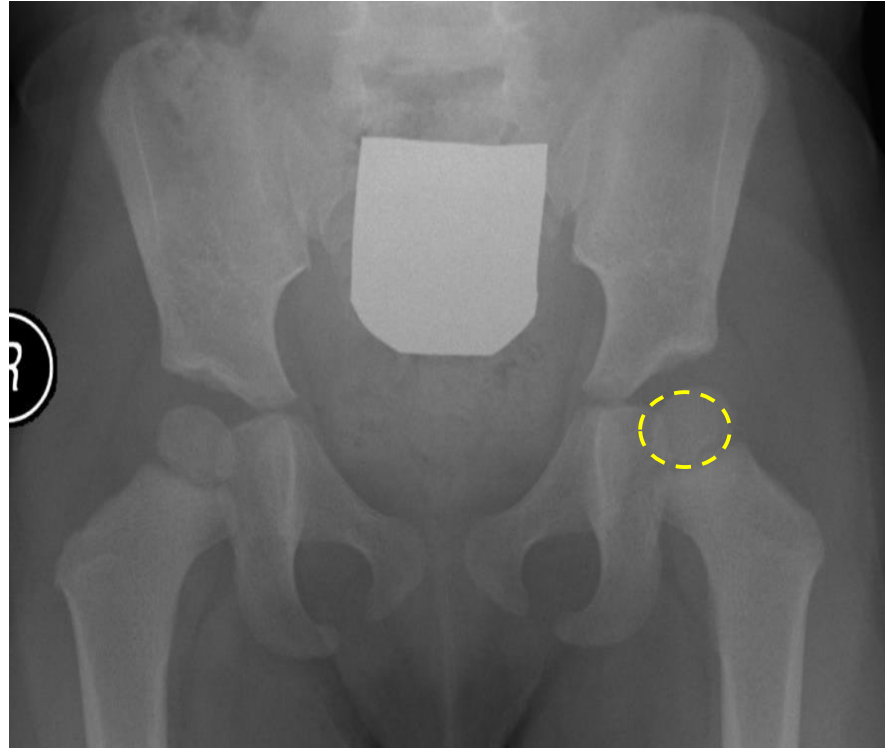
- Refer to orthopedic as emergency case

What they will do?

- In situ pinning – to prevent further damage to the vascularity
- Protected weight bearing for 3-4 weeks then full weight bearing
- No sport for 6 months



Perthes Disease



Perthes Disease:

- Where: at the level of head of femur
- Why: ↓ vascularity of head of femur
(avascular necrosis)

Cause → **unknown**

Typical :

4-8 years

↑ in males

↑ in obese

Severity of the disease depends on :
the amount of femoral head involvement



History:

- Hip pain or knee pain
- Minor trauma or no trauma
- Painful limping

On Examination:

- ↓ Abduction
- ↓ IR (internal rotation)
- Usually painful decrease range of motion
- Limping (painful)

Radiology:

- X-ray: - knee
 - Pelvis → ↓ head size
(irregular shape)
- If early – MRI can help



Treatment:

- Controversial
- Refer to pediatric orthopedics as an urgent case
- Guidelines of treatment:
 - > Control pain
 - > Maintain ROM
 - > Hip containment