

Common Pediatric Hip Problem

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Common Pediatric Hip problems:

➤ **DDH**

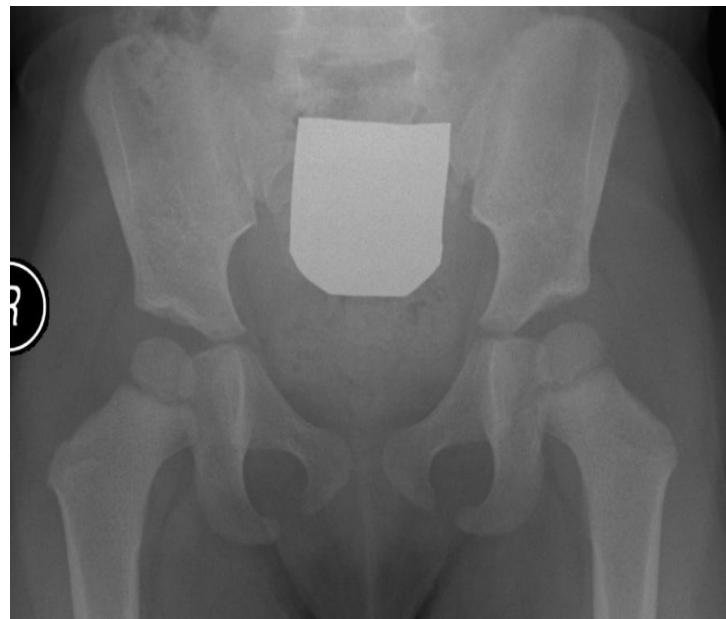
➤ **SCFE**

➤ **Perthes**

Normal pelvis

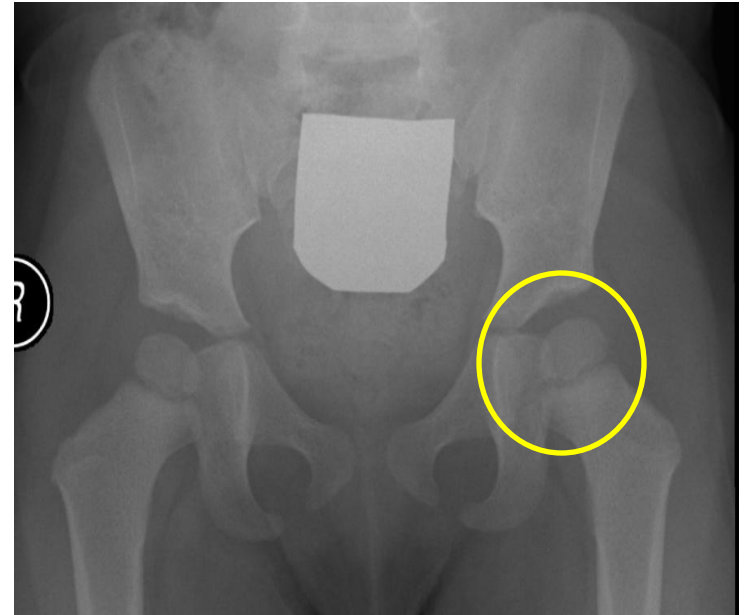


ADULT

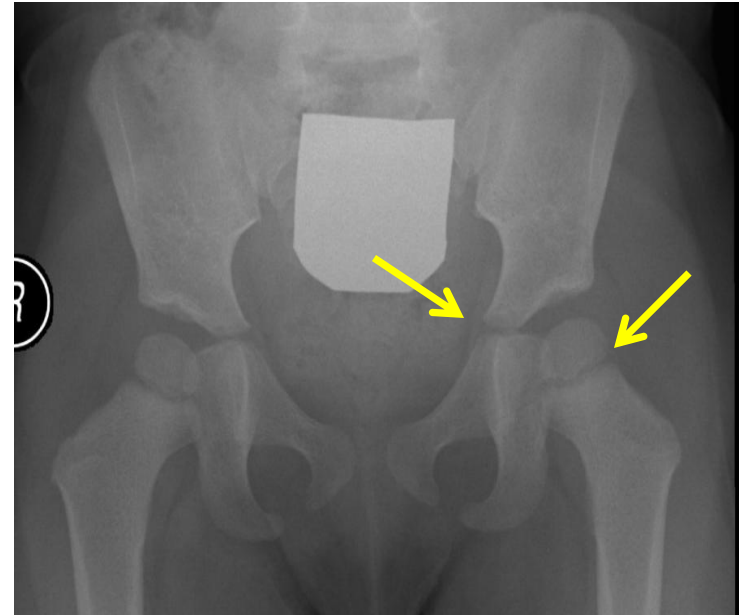


CHILD

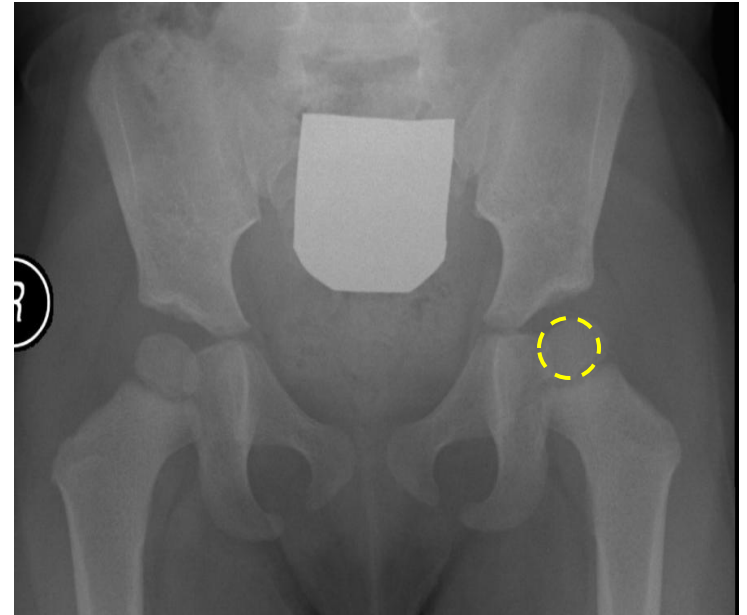
Normal pelvis



Normal pelvis



Normal pelvis



DDH

Normal hip

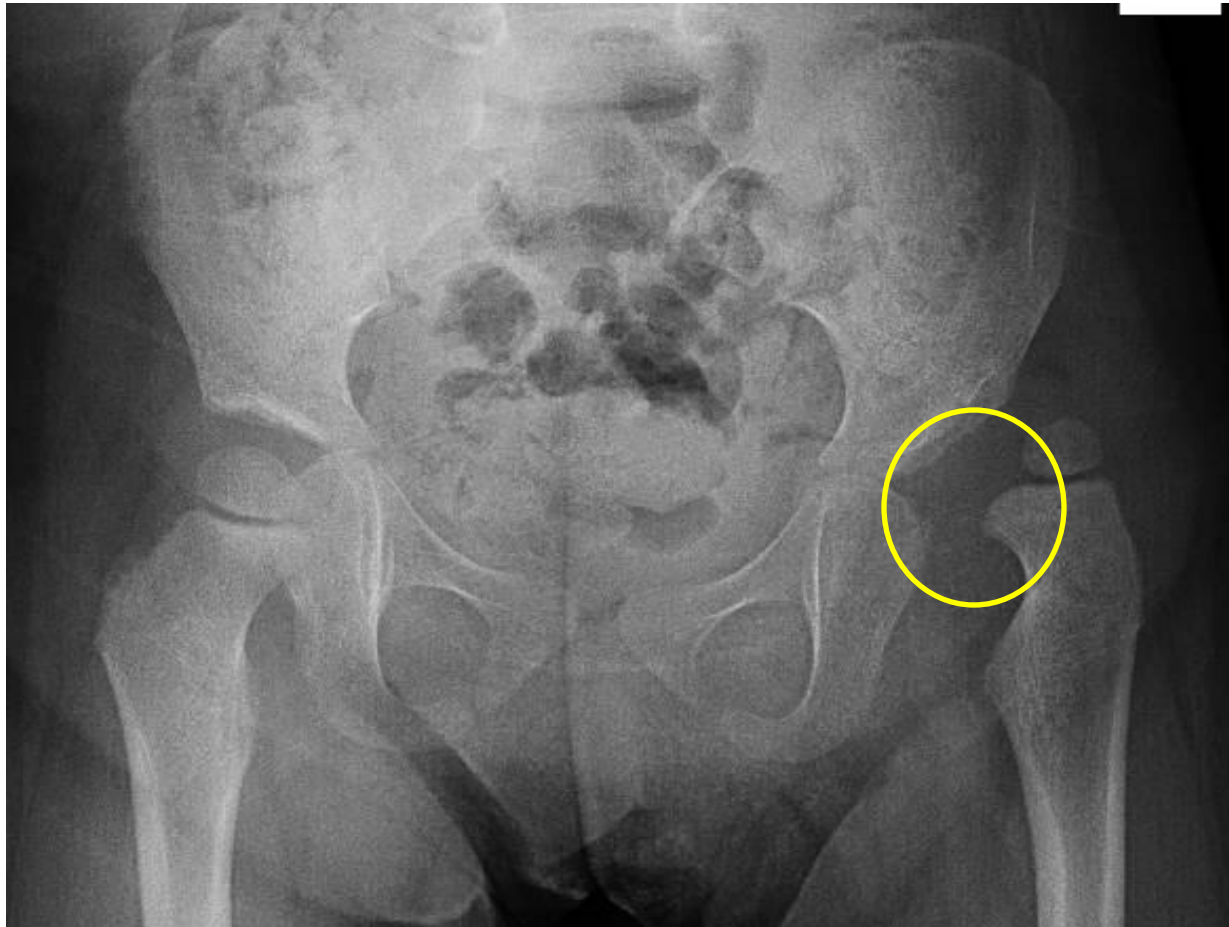
Dislocated hip



DDH

Normal hip

Dislocated hip

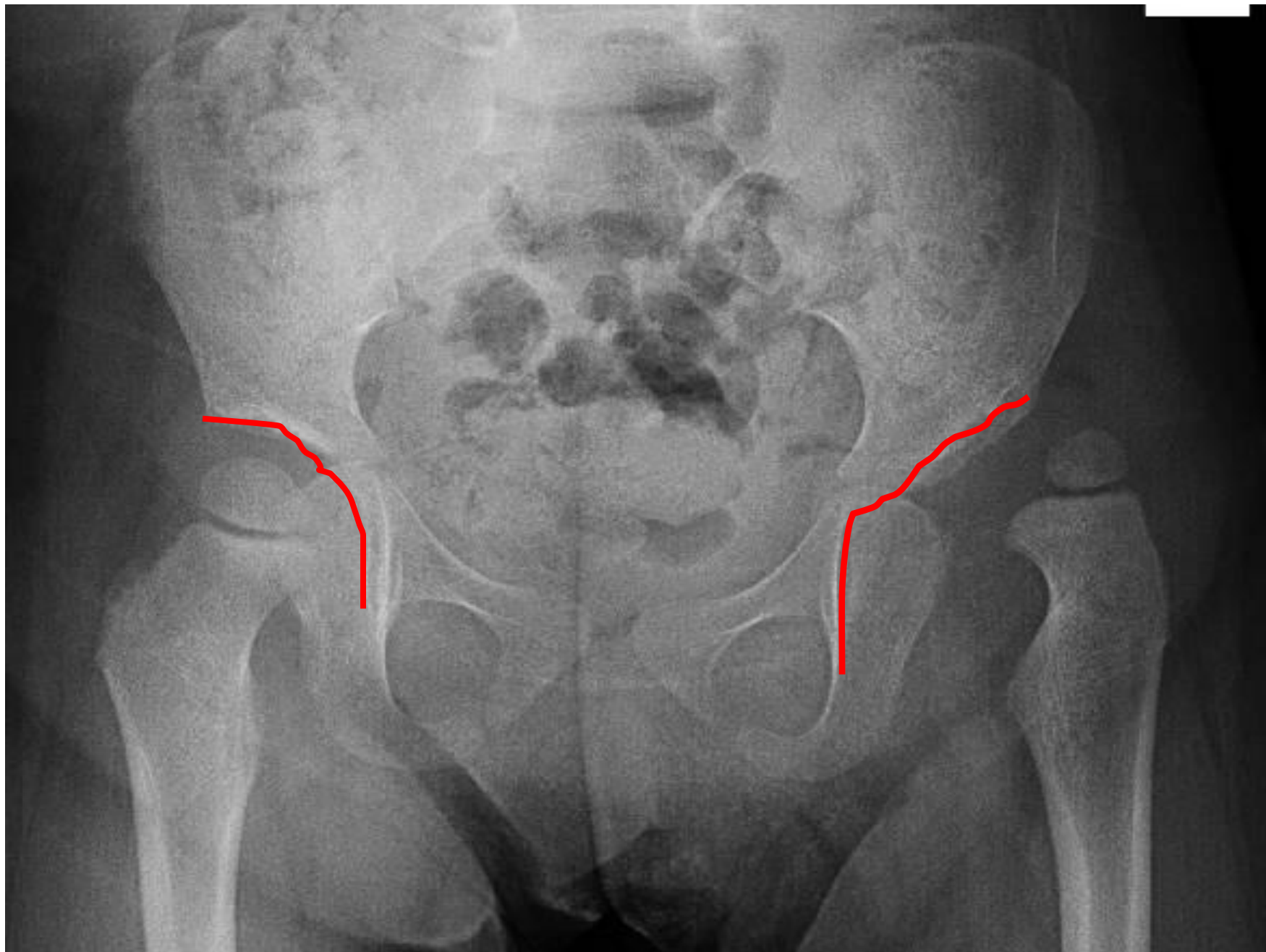


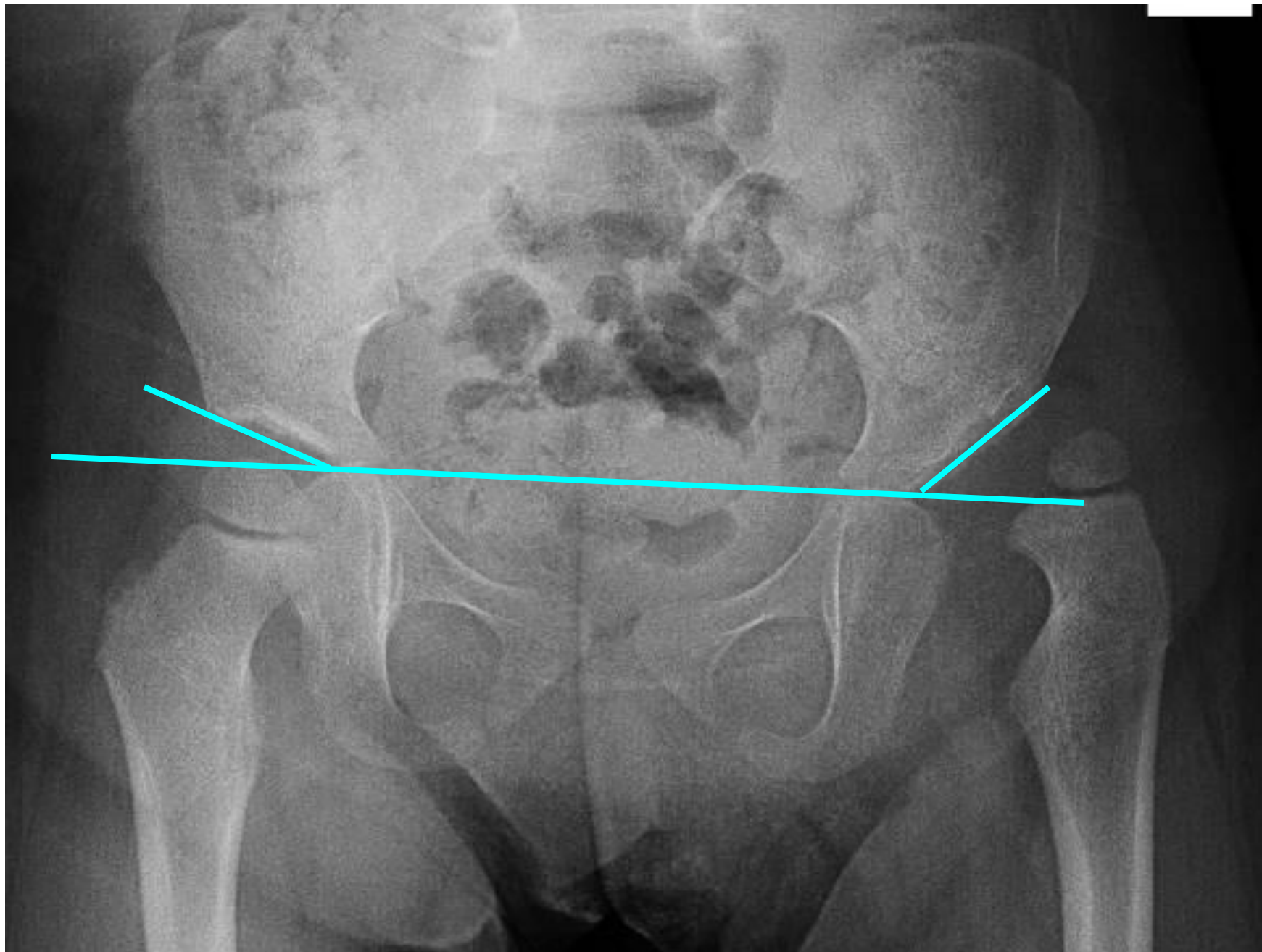
Nomenclature

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

Patterns of disease

- Dislocated
- Dislocatable
- Subluxated
- Acetabular dysplasia





Causes (multi factorial)

Unknown

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

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

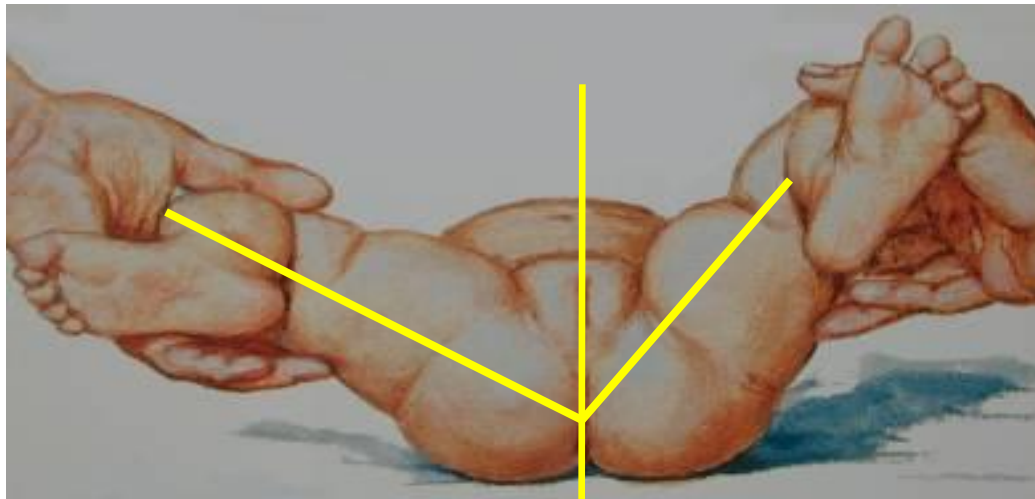


- Look:
 - External rotation
 - Lateralized contour
 - Shortening
 - Asymmetrical skin folds
 - Anterior – posterior





- Move
 - Limited abduction



- Special test

- Galiazzi
- Ortolani , Barlow test
- Trendelenburgh sign
- Limping (waddling gait if bilateral)

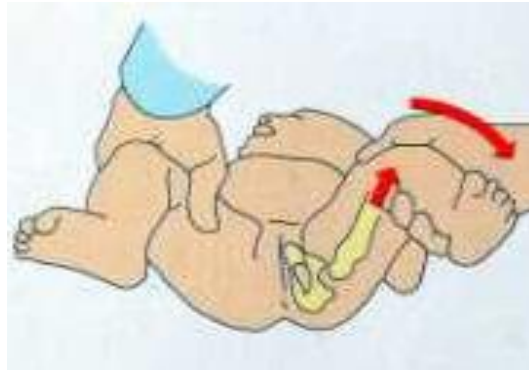
Special test

Galiazzi test



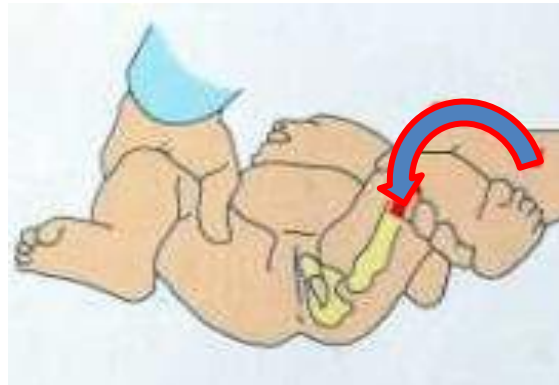
Special test

Ortolani test



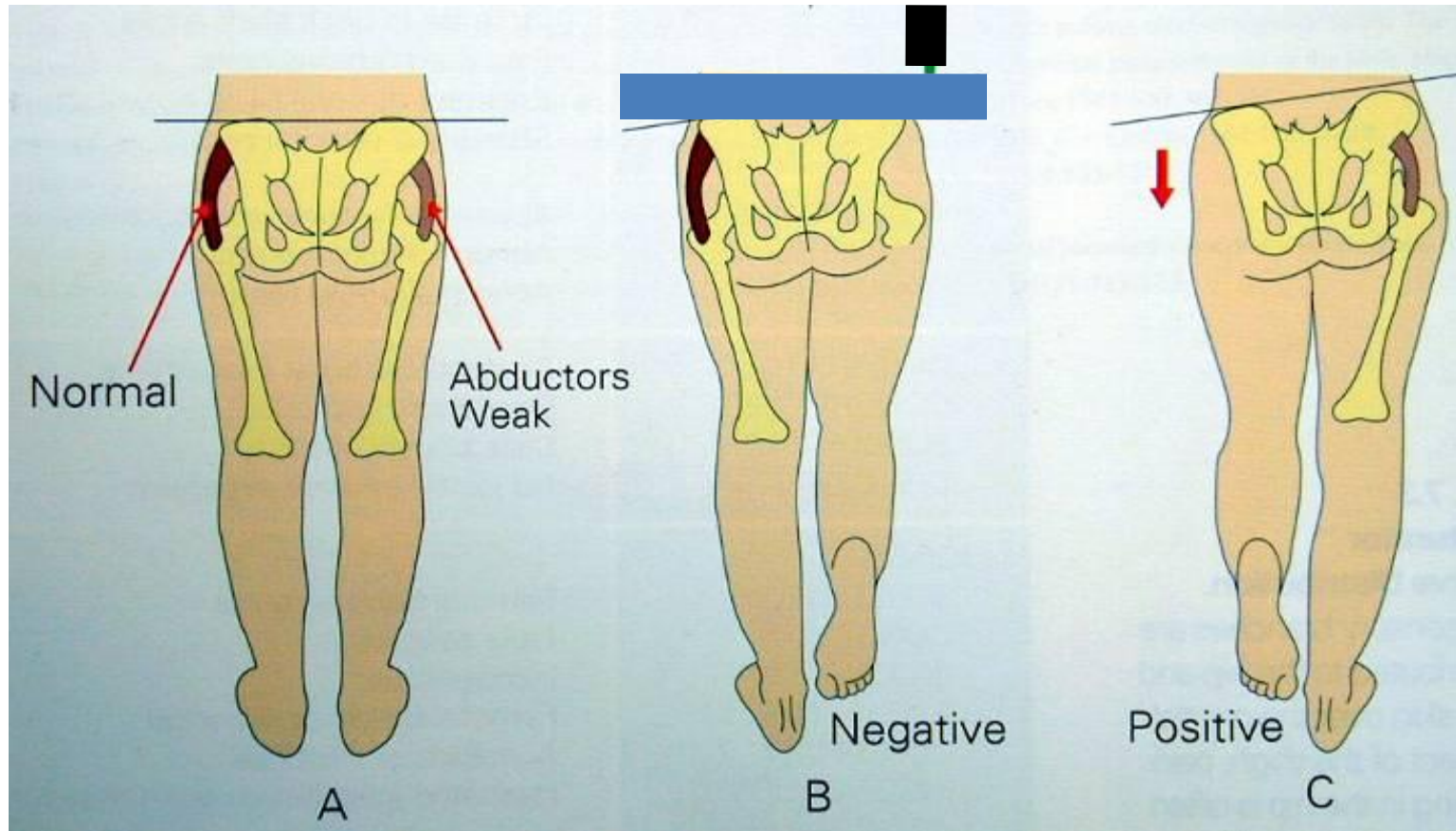
Special test

Barlow test



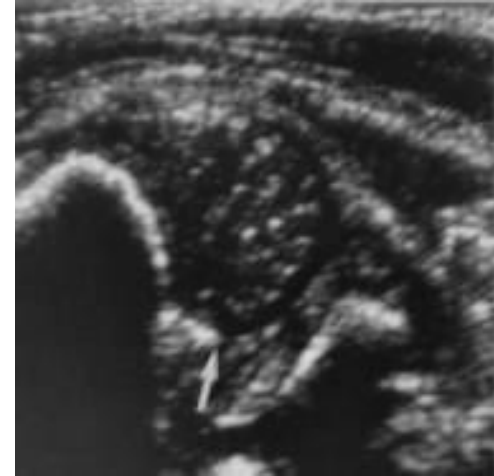
Special test

Trendelenburgh sign



Investigations

- 0-3 months U/S



- > 3months X-ray pelvis AP +



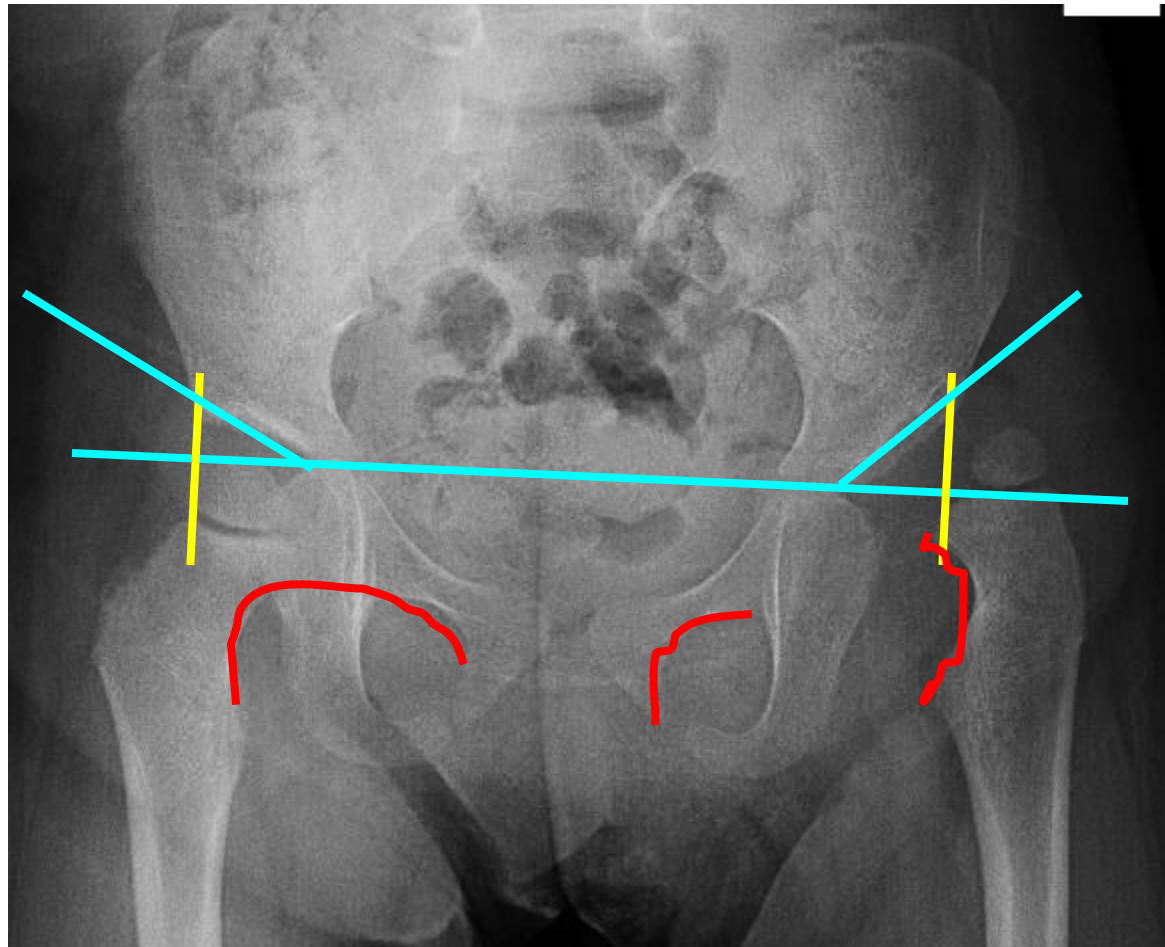
Radiology

- After 6 months: reliable



Radiology

- After 6 months: reliable



Treatment - Aims

- 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

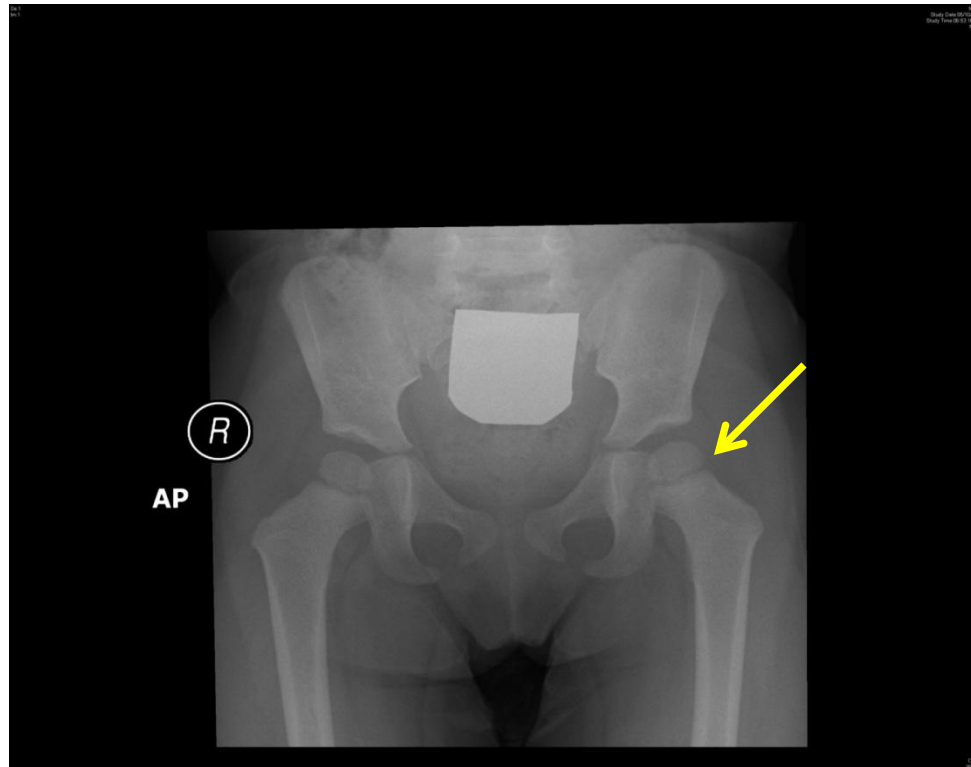
Treatment

- Method depends on age
- The earlier started, the easier it is
- The earlier started, the better the results are
- Should be detected EARLY
- Either surgical or non surgical

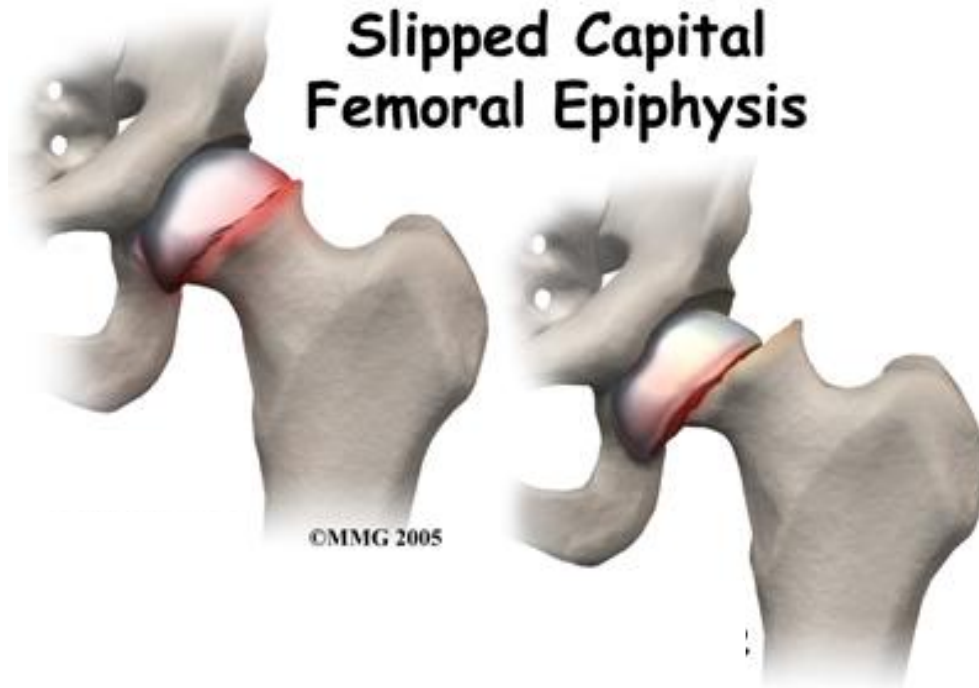




SCFE



Slipped Capital Femoral Epiphysis



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)

lx:

➤ X-ray

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

➤ If not clear but still doubtful MRI can help

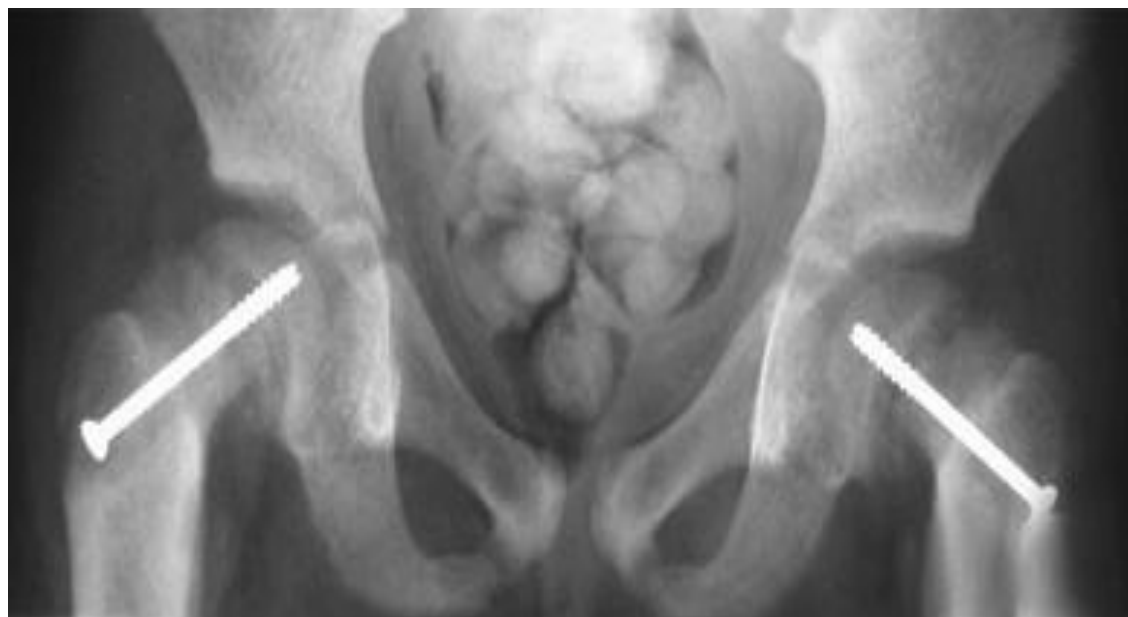


Treatment:

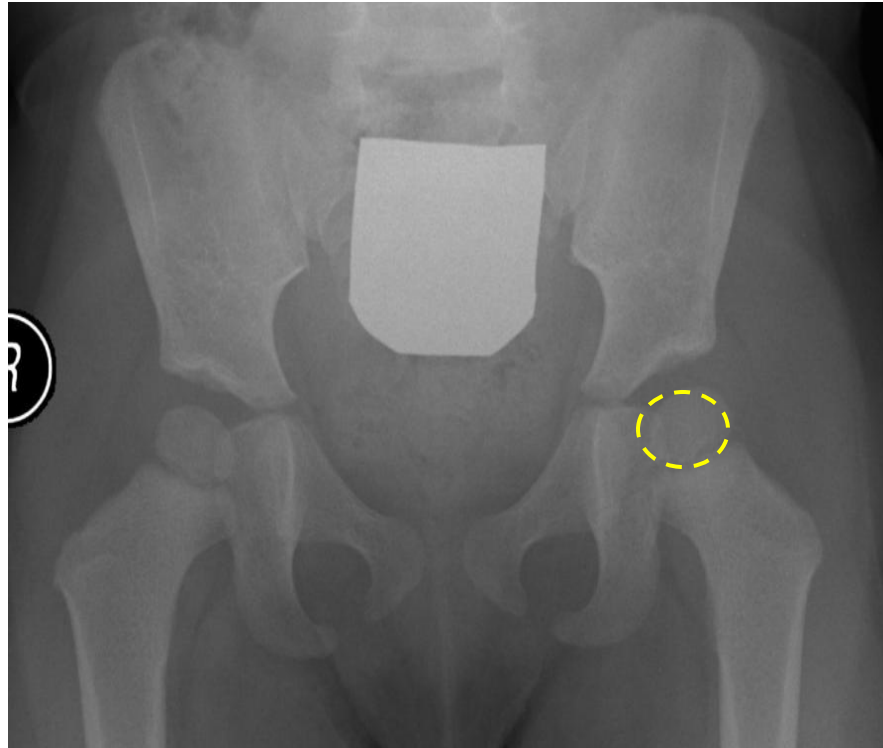
- Refer to orthopedic as emergency case

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



Perthe's Disease:



Perthe's 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 range of motion ↓ ↓ ↓
- Limping (painful)

ix:

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



Treatment:

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

thanks