

Differential diagnosis

At any age:

- Transient synovitis, Trauma, Septic arthritis, NAI, Bone malignancy
- Also: Acute osteomyelitis of the proximal femur, TB arthritis, juvenile spondyloarthritis, juvenile rheumatoid arthritis and juvenile chronic arthritis

Age <5y:

- Developmental dysplasia of the hip
- Transient synovitis common
- Also: Infantile coxa vera, acute infective epiphysitis

Age ~5-10y:

- Perthes' disease

Age ~10-15y:

- Slipped upper femoral epiphysis

Investigations

Bloods: Minimum of FBC, ESR (CRP), culture

Imaging:

- Plain X-ray hips (both, AP and lateral "frog leg" view).
- Ultrasound - best method of showing hip joint effusion.
- MRI - not often used, but may help if diagnosis unclear or surgery contemplated.

Transient synovitis ("irritable hip")

Summary:

- Usually has acute onset. Commonest cause of hip pain in a well child
- Self limiting condition thought to be due to viral infection or an autoimmune process.
- Often preceded by a viral URTI.
- 2M:1F.

Presentation:

- Pain usually not severe but may prevent weight-bearing on the affected leg.
- Usually no pain at rest and passive movements are only painful at the extreme ROM.
- Child is usually well and the ESR is either normal or slightly raised.

Management:

- Includes rest and analgesia, with mobilisation once pain has settled.
- Symptoms usually resolve within 2 weeks but may recur.
- There is no evidence of any long term complications.

Septic arthritis.

Summary:

- Child often toxic
- Often pain present at rest, refuse to weight bear, resist attempts to move hip.
- See separate article

Developmental dysplasia of the hip

Summary:

- Up to 60% of apparently abnormal hips will become normal without treatment after 1 month, leaving the true incidence as 1-2 per 1,000.

Risk factors:

- Female
- Breech position
- Caesarean section
- First born child
- Prematurity
- Oligohydramnios
- Family history
- DDH assoc with club feet, spina bifida and infantile scoliosis

Presentation:

- Barlow's test, Ortolani's test
- Asymmetrical skin creases in the thigh or buttock
- Unequal leg length
- Reduced hip abduction in flexion (normal is 90 degrees)
- Reduced distance between greater trochanter and anterior superior iliac spine

Management

- Reduce if dislocated
- Bracing (Pavlik harness, Frejka splint or other) for 2-3mo until USS/XR show stable
- Surgery if bracing fails or diagnosed >6mo old.

Perthes' disease

Summary:

- Self-limiting with occlusion of blood supply to femoral head causing avascular necrosis.
- Re-vascularisation and remodelling occur but femoral head may remain abnormal shape.
- 4M:1F. Aged 5-10yrs.
- RF: low birth weight, short stature, low socio-economic class and passive smoking.
- 85% unilateral.

Presentation:

- Gradual onset of pain (\pm referred to knee), limp & restriction of hip movements.
- More advanced cases may cause leg shortening and proximal muscle wasting.
- X-rays may be normal initially, widening of jt space (esp frog lateral view) or show flattening of the superolateral epiphysis and fragmentation.

Management

- Physiotherapy improves ROM & muscular strength but not bone changes.
- Surgery if >6yr (as \leq 6yr do well whatever)

Slipped upper femoral epiphysis

Summary:

- Usually at the onset of puberty and most often in very tall/thin or short/obese children.
- Other RF: Afro-Caribbean, boys, family history.
- 25% bilateral.

Presentation:

- Hip, thigh and knee pain. Often insidious onset.
- May be able to weight bear, but is painful.
- May be leg shortening
- Flexion of hip often also causes ext rotation.
- XR - AP & frog's leg view (Klein line on AP XR)

Management

- No walking, avoid moving or rotating leg.
- Analgesia & Ortho referral for surgery.
- >95% do well if slippage <33%.

