

The Limping Child

BACKGROUND

- A limp is an asymmetrical gait caused by pain, weakness or deformity
- Limp is never normal and a cause must be established
- Limp must be considered in terms of the child's development

DIFFERENTIALS

- Toddler (1-3 years)
 - ✓ Toddler's fracture
 - ✓ DDH
 - ✓ Discitis
 - ✓ Cerebral palsy
- Child (4-10 years)
 - ✓ Transient synovitis
 - ✓ Perthes disease
- Adolescent
 - ✓ SUFE
 - ✓ Osgood-Schlatter disease
 - ✓ Osteochondritis dissecans
- All age groups
 - ✓ Septic arthritis
 - ✓ Osteomyelitis
 - ✓ Juvenile idiopathic arthritis (JIA)
 - ✓ Reactive arthritis
 - ✓ Malignancy
 - ✓ Non-accidental injury

PERTHES DISEASE

- Avascular necrosis of the femoral head
- Age 2-10 years, M>F
- Bilateral in 10-15%
- Gradual onset limp & pain
- Early diagnosis by MRI
- Most recover with bed rest, pain relief & physiotherapy
- Severe cases require surgical intervention

TRANSIENT SYNOVITIS

- Commonest cause of acute hip pain in children
- Age 2-10 years, M>F
- Preceded by viral infection
- Usually resolves within 1 week with reassurance, bed rest and simple analgesia

HISTORY

- Painful or painless
- Duration of symptoms
- Arthralgia (joint pain) or arthritis (joint pain & swelling & increased temperature)
- History of trauma
- History of fever/toxicity
- Birth history (breech, oligohydramnios)
- Family history (arthritis, DDH)

EXAMINATION

- Centiles & vital signs
- Observe gait
- Gower's test
- Measure limb length
- Full neurological and musculoskeletal exam
- Examine spine
- Examine skin for rash, bruising
- Palpate for lymphadenopathy

INVESTIGATIONS

- Bloods: FBC, CRP, ESR, blood film
- Blood culture
- X-ray affected joints
- U/S scan ± joint aspiration
- Bone scan or MRI

TREATMENT

- Depends on the diagnosis
- Conservative: rest, NSAIDs
- Broad spectrum IV antibiotics if septic arthritis or osteomyelitis
- Orthopaedic intervention if Perthes disease, SUFE, DDH

TAKE HOME MESSAGES

- The limping child always requires a diagnosis
- Knee pain may be referred to hip

REFERRAL

- Joint pain & fever
- Joint pain in an adolescent
- Abnormal hip examination
- Child refusing to move joint
- Limp & constitutional symptoms
- Limp in an overweight child
- Nocturnal bone pain
- Suspected malignancy (hepatosplenomegaly)

DEVELOPMENTAL DYSPLASIA OF THE HIP (DDH)

- M:F = 1:4
- Risk factors: breech delivery, first born, family history, oligohydramnios
- May not be detected in newborn period
- Presents with asymmetrical gluteal and thigh skin folds and Trendelenberg gait
- Positive Ortolani and Barlow signs in newborns
- Infants are treated with a Pavlik harness
- Children who present after 6 months or fail to respond may require surgery

SLIPPED UPPER FEMORAL EPIPHYSIS (SUFE)

- Most common hip disorder in adolescents
- Mean age at diagnosis is 13.5 years in boys and 12 years in girls, M>F
- Risk factors: obesity, endocrine disorders
- Bilateral in 25%
- Presents with limp, pain and inability to bear weight
- Orthopaedic emergency: further slippage may result in avascular necrosis
- Management is surgical

REFERENCES

- Tenore, Levine. *European Mastercourse in Paediatrics*. 2011.