



An approach to the limping child

Dr Sarah Dunlop, 2021

Overview

1. Most children presenting with a limp do not require investigations
2. Observing gait may help localise the problem and narrow the differential diagnosis
3. Complete inability to walk or weight bear is a red flag
4. Septic arthritis is an orthopaedic emergency. Consider in all limping children with severe localised joint pain and fever

Background

- Transient synovitis, acute myositis and minor trauma are common causes of limp in children, but serious pathology should be considered
- Pain causing limp can be referred. Assess joints above and below (including spine) and abdo, pelvis, scrotum

Common DDx toddler (<5yo)

Transient hip synovitis

Myositis

Toddlers #

Developmental dysplasia of the hip (DDH)

Common DDx child (5-10 years)

Transient hip synovitis

Myositis

Developmental dysplasia of the hip (DDH)

Perthes disease

Common DDx adolescent (>10 years)

Stress fractures & sprains

Traction apophysitis

Osgood Schlatter - tibial tuberosity

Severs - calcaneus

SUFE (slipped upper femoral epiphysis)

Other limp differentials - all ages

NAI

Infections

Malignancy

Rheumatological, immunological

Intra-abdominal, genitourinary

Haematological

Functional

History with red flags

- ▶ Duration of symptoms **>7 days**
- ▶ History of trauma, falls or injury
- ▶ Pattern and severity of pain and limp: **severe localised joint pain** should raise suspicion for septic arthritis
- ▶ **Change to urinary or bowel habit**
- ▶ Functional limitations: **complete inability to walk or weight-bear**
- ▶ **Nocturnal** pain and symptoms
- ▶ **Systemic symptoms**: fever, night sweats, chills, rigors, rash
- ▶ **Constitutional symptoms** eg unplanned weight loss, lethargy/easy fatigue, anorexia (consider malignancy/haematological cause)
- ▶ Recent viral infection (acute myositis, transient synovitis)

Examination with red flags

- **Generalised wasting**, pallor, interaction with carer
- **Fever**
- Gait
- Bone vs joint vs soft tissue
- Joints "Look, Feel, and Move" including joints above and below
 - **Look:** resting position, leg length disparity, swelling, deformities, skin changes e.g. rash, wound, bruising
 - **Feel:** heat, cold, tenderness, crepitus, fluctuance
 - **Move:** active & passive ROM; tone, power, reflexes
- Neurovascular
- Abdomen, scrotum, back/spine
- **Petechiae/purpura/bruising** (HSP, malignancy/haematological)

Investigations

- ▶ Targeted to history & examination
- No investigations if **all of the following** apply:
 - no red flags in history or exam
 - Weight bearing with mild or no discomfort after simple analgesia
 - a clear working diagnosis and/or a plan for review within 7 days of onset of limp

Refer Starship ortho if...

- Possible non-accidental injury
- Clinical or laboratory features of malignancy
- Systemically unwell
- Sx > 7 days, or unable to weight-bear or permit movement after simple analgesia
- Suspected septic arthritis