The Limping Child

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• 2013 OLCHC ED ~35,000 attendances
• Referrals containing “limp” in p/c- 186

• “Limp” diagnoses: 284
  – Transient Synovitis/ Irritable Hip 181
  – DDH 6
  – Perthes Disease 7
  – SUFE 6
  – Limp- unspecified 84
<table>
<thead>
<tr>
<th>Preschool</th>
<th>School age</th>
<th>Adolescent</th>
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<tr>
<td>DDH</td>
<td>Trauma</td>
<td>Fracture</td>
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<tr>
<td>Transient Synovitis</td>
<td>Perthes Disease</td>
<td>Osteochondroses</td>
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<td>Fracture</td>
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<td>Cause by acuity</td>
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Case 1

- Tommy, 2yo male
  - Reluctant to weight bear on left leg today
  - No trauma
  - URTI last week
  - Now mobilising post-paracetamol
  - Improving over this morning
  - No fever
Case 2

- Tommy, 2yo male
  - Reluctant to weight bear on left leg today
  - Caught left leg under him on slide yesterday
Toddler Fracture
Case 3

- Tommy, 2yo male
  - Reluctant to weight bear on left leg today
  - Temp 38.5c
  - Not coryzal
  - Upset on exam of left leg
  - Difficult to localise further
Septic Arthritis
Standardised approach

• Clinical practice guideline

• Decision making tools
Limping Child

Consider other pathologies
- Other lower limb pathology (e.g. toddler's fracture)
- Osteomyelitis at different site
- Bone tumour
- Referred pain from lower back
- Psoas abscess
- Abdominal/ testicular pathology

Pain localised to hip?
| Consider KNEE pain referred from hip |

Yes

Unwell child? Temp >38°C?
- OR Non-Weightbearing
- OR Markedly Decreased ROM

Yes

- Analgesia
- FBC, ESR, CRP
- Blood culture
- Urine MC & S
- Plain radiography
- Senior opinion
- Refer Orthopaedics
- Consider urgent hip USS

No

Analgesia
- Plain radiography as indicated
- Senior review ± follow up as appropriate

Yes

History of trauma or Age 4-10 and possibility of Perthes’ or Age 10-15 and possibility of SUFE?

No

- SENIOR Review
- Regular NSAIDS
- Relative Rest
- Follow up review 2-5/7 (x-ray will be taken at review if not done and not settling)
- Return ASAP if temperature increases or condition deteriorating

Authors: Dr. Peter McCanny, Dr. Sean Walsh, Prof. Ronan O’Sullivan (May 2010)
Decision tools

- Kocher’s Criteria:
  - febrile >38.5c
  - non weight bearing
  - WCC >12 x 10^9
  - ESR> 40mm/hr

J Bone Joint Surg 2004
When to Investigate

● **Xray**
  - Trauma
  - Apparent TS with duration > few days
  - Adolescent with sudden hip/groin pain + limp

● **Bloods (FBC, CRP, ESR)**
  - Apparent TS x > few days
  - Fever + limp
  - Bone pain (sub acute)

● **Ultrasound**
  - Useful to evaluate for hip effusion (SA Vs TS)
  - May show subperiosteal pus (OM)

● **Bone scan**
  - Osteomyelitis
  - Superceded where available by MRI
Red flags

- Fever + limp
- Adolescent with sudden limp
- Nocturnal pain
- Ataxia
- Lower limb weakness
Neurological causes of Limp

- Intracranial tumour
- Guillian Barre
- Transverse Myelitis
SUF E
When to refer to ED

- Acute limp:
  - unable to weight bear
  - fever with limp
  - painful limp
- Bloods suggestive of acute leukaemia
- XR suggestive of bony lesion
- Ataxia
- Lower limb weakness
- Abnormal neurology exam
When to refer to OPD

Prior to referral, if possible perform:

• X-ray
• FBC ESR CRP
When/ what to refer to OPD

Sub-Acute/ Chronic limp

• Intermittent
• Worse in mornings
• Atraumatic
• Reduction in ROM
• Raised inflammatory markers
• No fever usually
• Hypermobility
When to refer to OPD- Orthopaedics

- Osteochondroses
  - Non resolving Osgood Schlatter, Severs
- Chronic symptoms in absence of Xray / blood findings
- Apparent recurrent TS with normal hip X-rays
- Late Dx DDH or Perthes (via ED)
When to refer to OPD-Physiotherapy

- Symptoms suggestive of Osteochondroses
- Local Physiotherapy
- Orthopaedic OPD
Take-home message

- Causes of Limp vary with age
- Fever with painful limp needs investigation
- For recurrent/chronic limp OPD referral may be most appropriate
- X-rays less useful in atraumatic limp <10yo
- Adolescents with acute hip OR knee pain warrant Xray to o/r SUFE