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

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Limp- Cause by age

Preschool	School age	Adolescent
DDH	Trauma	Fracture
Transient Synovitis	**Perthes Disease**	Osteochondroses
Fracture	**Transient Synovitis**	**SUFE**
Foreign Body		Overuse syndromes
JIA		Osteochondritis dissecans
Malignancy	Malignancy	Malignancy
SA/OM	SA/OM	SA/OM
Discitis		Pain amplification syndromes

Cause by acuity

Acute	Sub-acute	Chronic
Fracture	JIA	Cerebral Palsy
Transient Synovitis	Malignancy	DDH*
SA		Perthes Disease*
SUFE		
OM		

Clinical presentations

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

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Case 2

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

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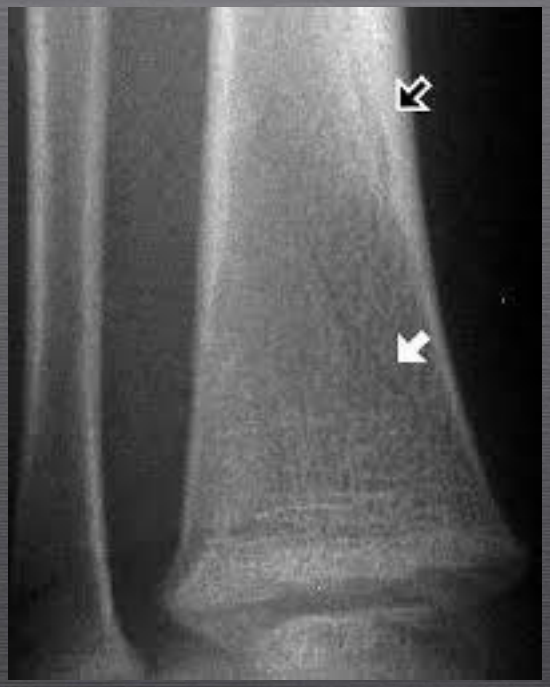
Toddler Fracture



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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

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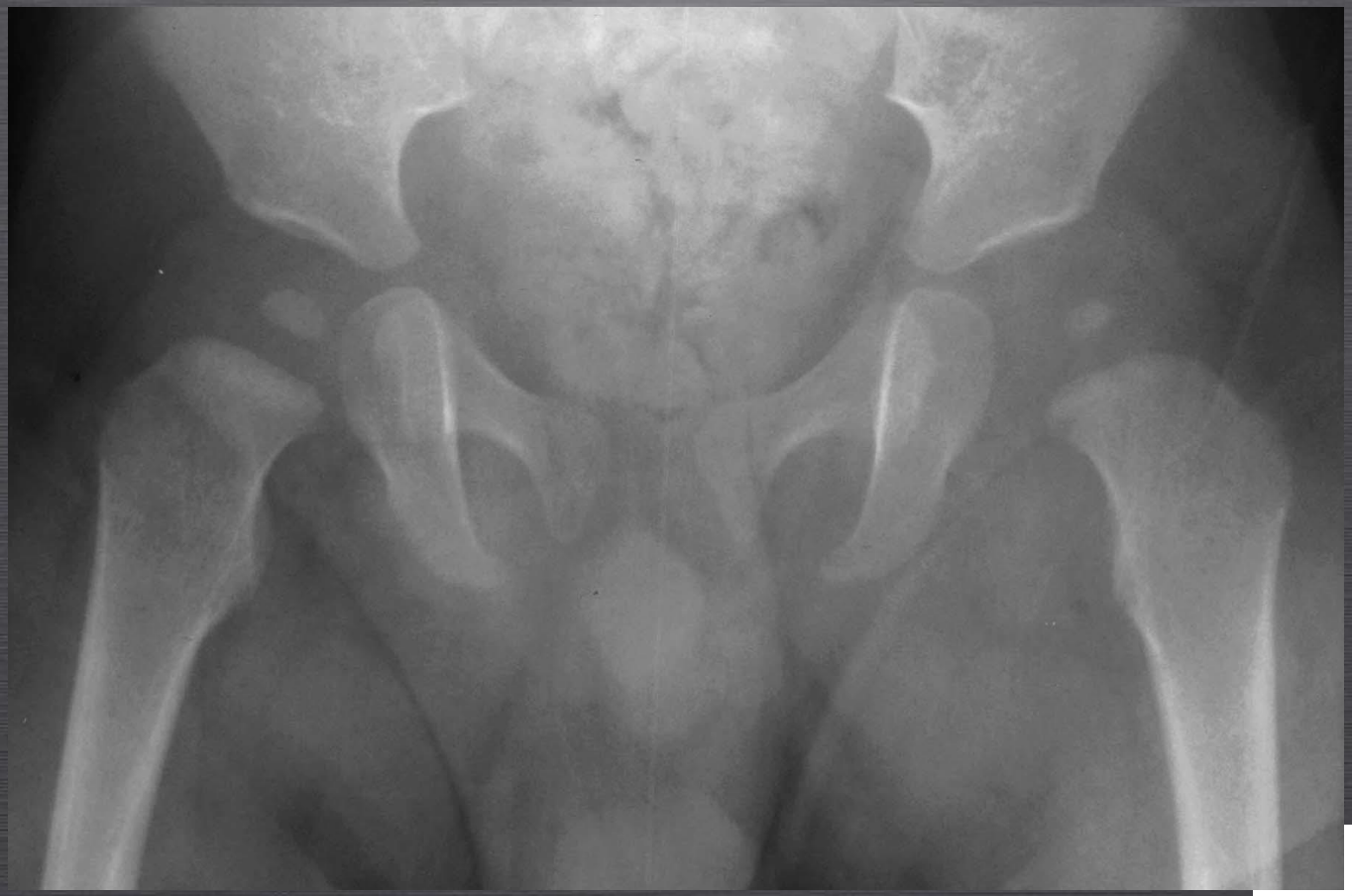
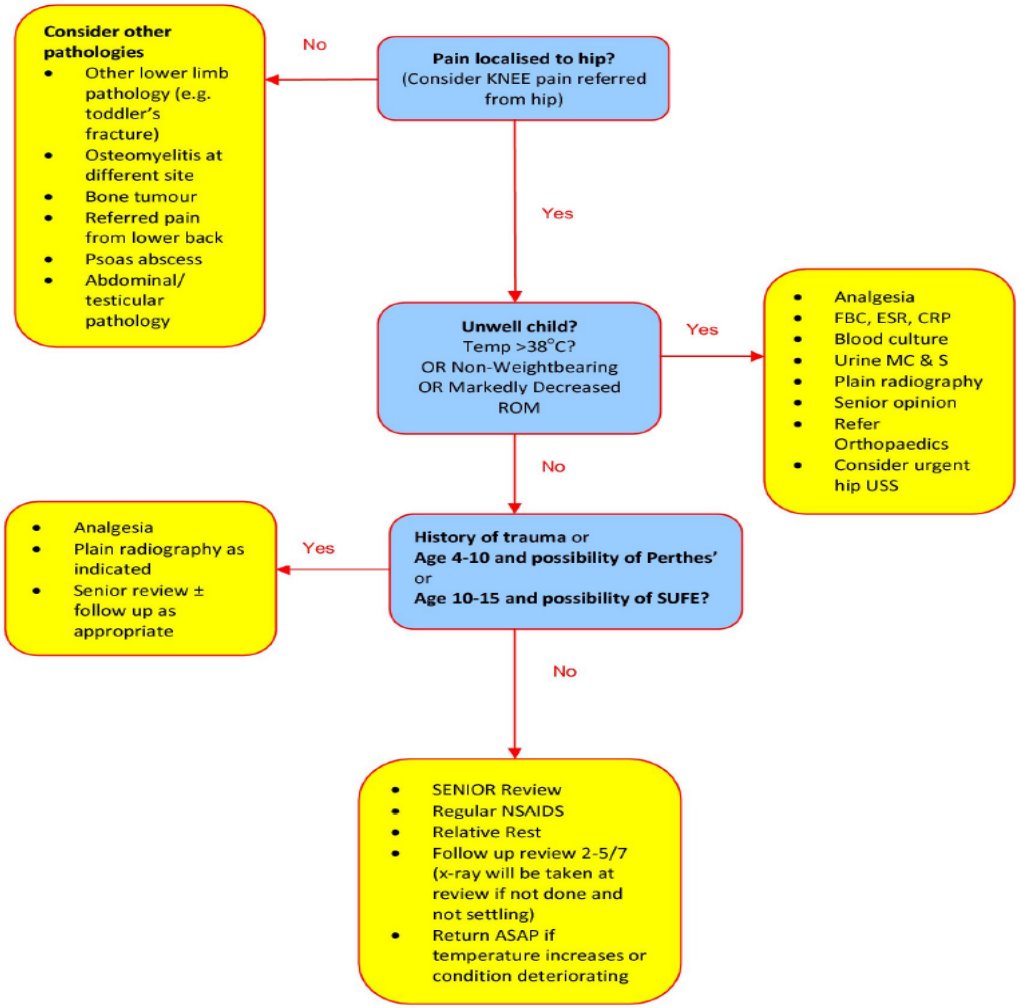
Septic Arthritis



Standardised approach

- Clinical practice guideline
  - ***Implementation of an evidence based guideline reduces blood tests and length of stay for the limping child in a paediatric emergency department*.** McCanny PJ, McCoy S, Grant T, Walsh S, O'Sullivan R. Emerg Med J. 2013 Jan;30(1):19-23.
- Decision making tools

Limping Child



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

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Decision tools

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

J Bone Joint Surg 2004

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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

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Red flags

- Fever + limp
- Adolescent with sudden limp
- Nocturnal pain
- Ataxia
- Lower limb weakness

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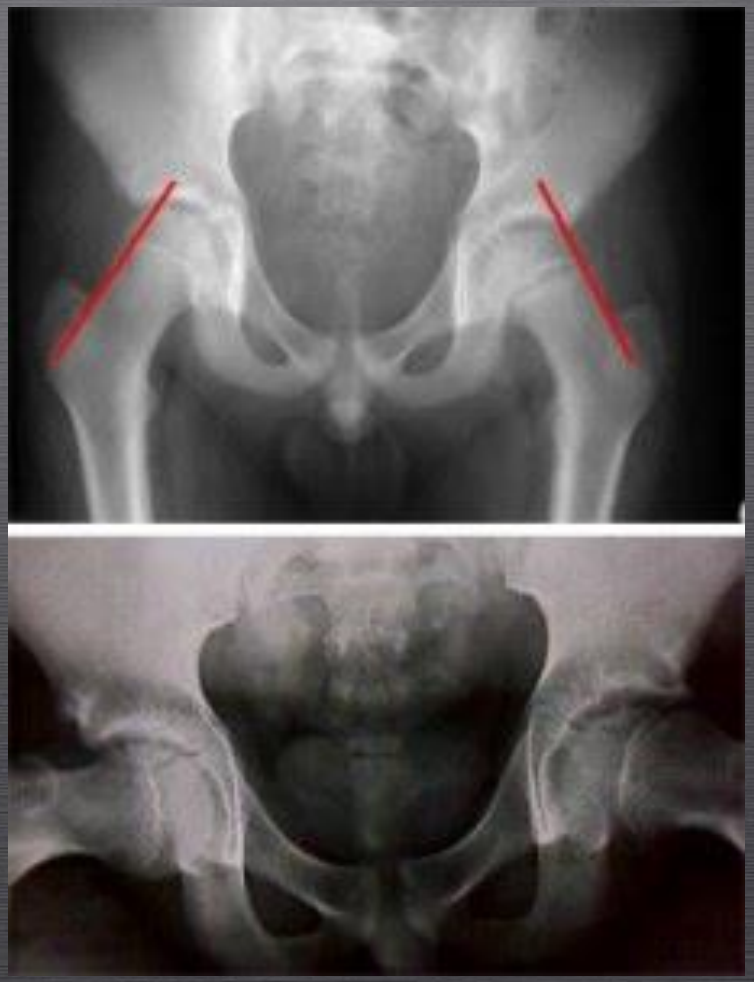
Neurological causes of Limp

- Intracranial tumour
- Guillian Barre
- Transverse Myelitis

SUFE



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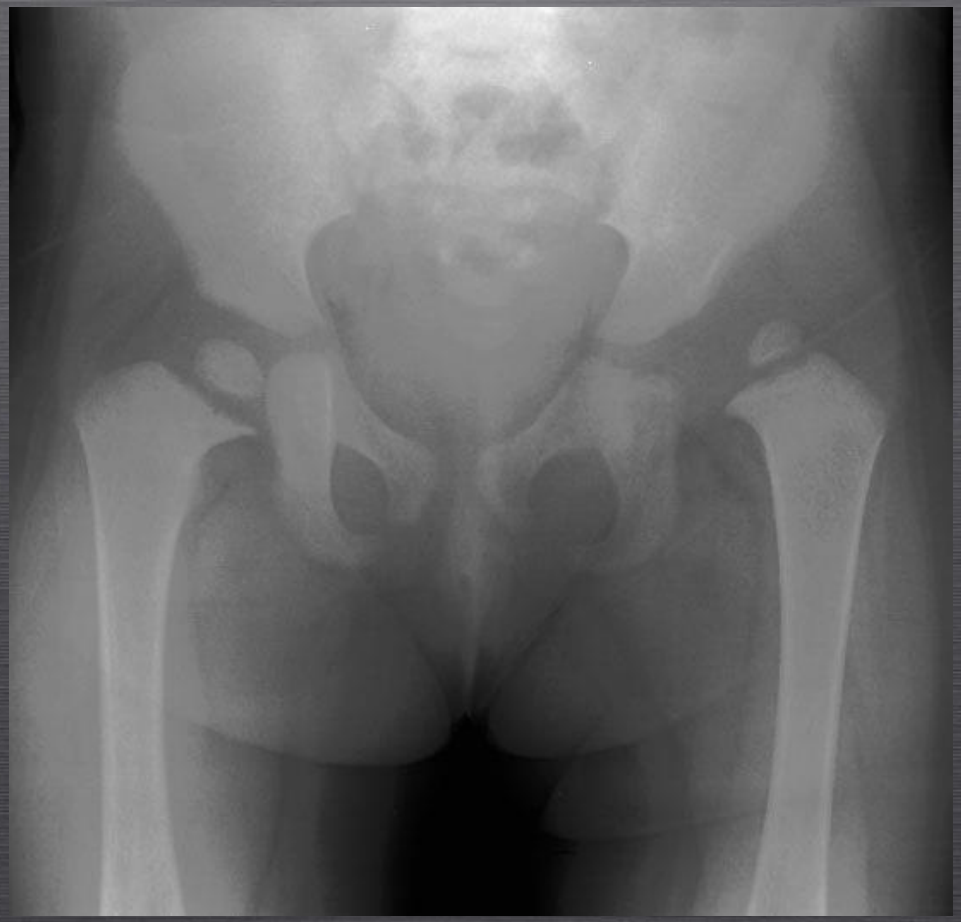
DDH



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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

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When to refer to OPD

Prior to referral, if possible perform:

- X-ray
- FBC ESR CRP

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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

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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)

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When to refer to OPD- Physiotherapy

- Symptoms suggestive of Osteochondroses
- Local Physiotherapy
- Orthopaedic OPD

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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

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