Suggested approach to atraumatic limping child

**HISTORY**

Ask about:
- Onset of symptoms
- Features suggestive of:
  - sepsis
  - NAI
  - Malignancy
  - Reactive arthritis
  - JIA
- Parental concerns
- Development and growth

**EXAMINATION**

- General examination
- Examination of whole limb
- pGALS MSK screen
- Regional MSK examination
- Neurological examination
- Temperature
- Urinalysis

**INVESTIGATIONS**

If red flags are present undertake:
1. **Blood tests:** FBC (+ blood film), CRP, ESR, blood cultures.
2. **Plain X-rays:** Symptomatic joint + contra-lateral. Consider x-raying adjacent joints if origin of pain is uncertain. For hip x-rays - request frog-leg views *
3. **Hip USS:** Request urgently. If no effusion present on USS, septic arthritis unlikely.

**RISK FACTORS FOR SEPTIC ARTHRITIS**

1. History of fever of > 38.5°C
2. Non-weight bearing
3. Serum WCC > 12x10^9
4. ESR > 40mm/h or CRP > 20 mg/l

Risk of septic arthritis increased if **effusion on USS** or if **3 risk factors**

2 risk factors – 40% risk of septic arthritis

- Admit under shared paediatric / orthopaedic care.
- Urgent joint aspiration. Synovial fluid for microscopy / Gram stain & culture.
- If > 50 x 10^9/l WCC ± bacteria in aspirate - commence IV antibiotics urgently**

0 or 1 risk factor only – risk of septic arthritis is very low

Systemically well, temp < 37.5°C, full weight bearing, no red flags, full range movement, normal FBC / ESR.

**YES**

- Analgesia, open access to ward
- Arrange paediatric review in 48 hrs.
- If still symptomatic, re-examine & screen all joints (pGALS as a minimum)
- Consider repeat bloods (FBC, ESR, CRP), Mantoux test, Lyme serology and imaging.
- If symptomatic for > 2 weeks OR before contemplating invasive procedures (e.g MRI, bone scan, arthroscopy) refer to paediatric

**NO**

**Red flags:**

Systemically unwell, temperature >38.5°C, non-weight bearing, reduced range / asymmetry of joint movement, focal bone or joint tenderness, “Pseudoparalysis”, red, warm, hot joint, pallor / bruising, lymphadenopathy and organomegaly

*If x-ray abnormal or suggestive of fracture, SUFE / Perthes – refer to orthopaedics

**If microscopy negative, treat as transient synovitis: regular analgesia, mobilisation, open access, regular OP review until symptoms resolved. Advise to consult if high fever / unwell. If symptoms persist for > 3 weeks refer to paediatric rheumatology.

# based on Kocher’s clinical prediction rule and validated to differentiate between septic arthritis and reactive arthritis at the hip

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References
