Limp in Childhood: An Audit of our Practice Against Local Guidance
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Introduction
- Limp is common cause of presentation to hospital in children
- Accounts for up to 5% of emergency department visits in children
- Most commonly presents in children aged 1 - 4 years
- Most commonly involves hip or knee
- Causes can be broken down into:
  - Common, benign, self-limiting conditions: Transient synovitis
  - Rarer, more serious conditions: Septic arthritis, Osteomyelitis
  - Malignancy
  - Non-accidental injury
  - Perthes
  - SUFE (slipped upper femoral epiphysis)
  - DDH
  - JIA
- Further difficulties in diagnosis:
  - Children struggle to localise pain
  - Pain may be referred from another joint
  - History of trauma may be a red herring
  - Treatment with antibiotics may alter presentation of an infected joint/bones
- Therefore it is important to investigate appropriately and follow up to ensure resolution of symptoms
- Currently, there are no national guidelines for the investigation and management of limp in children in the UK.

Aims
- To investigate whether, in the Children’s Clinical Decision Unit, investigation and management of childhood limp followed local guidelines
- To identify if any significant diagnoses were missed
- To revise the local guidelines to ensure they were up to date and correctly reflected best practice.

Method
1. A search was done for patients presenting with limp to our Children’s Clinical Decision Unit within the last 6 months.
2. Their electronic medical records were then reviewed for details of their admission, investigations, diagnosis, management, and follow-up.
3. These were compared to local guidelines at Oxford University Hospitals.
4. The records were also reviewed for any re-presentations and missed diagnoses.

Results
The search found 106 patients.

Demographics of patients:

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Age Distribution

- 0-1 years: 20%
- 1-2 years: 18%
- 2-3 years: 15%
- 3-4 years: 14%
- 4-5 years: 13%
- 5-6 years: 12%
- 6-7 years: 11%
- 7-12 years: 10%
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Frequency vs. Joint

- Knee: 34%
- Ankle: 15%
- Foot: 10%
- Hip: 14%
- Elbow: 13%
- Shoulder: 12%
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Missed Diagnoses:

- Osteomyelitis 1
- Myositis and Lymphadenitis 1
- Osteochondral Injury 1
- 2nd and 3rd metatarsal fractures 1

Limitations
- Documentation sometimes inadequate, making data collection difficult
- Data collected from EPR and not from handwritten notes
- Retrospective audit

Conclusion
- Adherence to limp guidelines was poor and as a result significant pathology was missed.
- Recommendations included:
  - Increased education of doctors in training about the limp assessment management guidelines
  - Creation of a limp protocol
  - Reinforcing mandatory telephone reviews after discharge and compulsory recalling of patients with ongoing symptoms
  - Better documentation of diagnoses (including those suspected/likely diagnoses)

Future Directions
- Further ongoing work includes reviewing and updating the limp guidelines.

References
1. OUH Guidelines: Limp in Children