LRI Emergency Department

Standard Operating Procedure for:

Management of the limping child

Trust Ref C13/2016

Staff relevant to:	Staff working within the Children's ED
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The Child with a limp

Who this guideline applies to

This guideline is for all clinical staff working within the Children's ED. This includes, but is not limited to Emergency Department, Paediatric & Orthopaedic staff.

Introduction

Children and adolescents often present with a limp or an abnormal gait. The cause is generally self-limiting trauma or transient synovitis (irritable hip) but a third of presentations may have other causes. The incidence of transient synovitis versus septic arthritis has a ratio of up to 10:1 in some studies.

Don't Miss

Septic arthritis – *always seek senior opinion on any child with a limp and fever*
Slipped Upper Femoral Epiphysis - *take care in examining the whole leg which includes the hip; pain is often referred to and from the hip and knee*

General management

Child with limp – ensure adequate analgesia if in discomfort

Fever AND distressed, not moving limb or appearing generally unwell (+/- fever)	Fever but appears well	No Fever and appears well	
FBC + CRP Blood Culture X-Ray affected joint Alert Senior Urgently Orthopaedic Review	FBC + CRP Blood Culture Consider imaging Observe If Normal bloods and observations stable – review clinic Orthopaedic/Paediatric review if blood abnormalities or deterioration	<5 Good range of movement and no distress on focused examination (review with senior if reduced range of movement of hip or knee)	5 or above X-ray (AP and Lateral) guided by examination Request pelvic film if hip pathology suspected (Frogs leg views)

Follow up is dependant on severity of limp, parental understanding of risk and any relevant social factors . Children can be safety-netted if symptoms likely to resolve over short time period and parents clearly understand diagnosis is not 100% certain.

If specific review is needed please refer to fracture clinic.

Any suspicion of SUFE must be discussed with the oncall orthopeadic team. If no fracture but suspicion of Perthes or DDH refer to elective Paediatric Orthopaedics. Always ensure documentation of management plans from the orthopaedic team.

Document parents understand to return if pain increasing or limp is getting worse

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Important considerations by Age

Range (years)	Toddler 1-4	Child 5-10	Adolescent >10
Be sure to consider:	Toddlers Fracture Transient Synovitis Developmental Dysplasia of Hip Non-accidental Injury	Transient Synovitis Perthes Disease	Slipper Upper Femoral Epiphysis (SUFE) Overuse/Pain Syndromes
Be mindful of:	Trauma, Sickle Cell, Malignancy, Juvenile Idiopathic Arthritis		
Always think:	Septic Arthritis (non weight bearing and CRP > 20 mg/dl is high risk)		

History and Examination

Duration of symptoms – Have episodes occurred in the past?

Is it a painful or painless limp?

Are there associated symptoms external to the lower limbs?

Crawling but inability to walk generally indicates lower limb rather than hip pathology

Minor trauma is often a red herring and maybe the presenting feature of Transient Synovitis, Perthes disease or SUFE's. Please see condition specific information below.

Have you isolated the hip to assess pain? (*Extend hip, flex knee and then rotate internally and externally*). Hip pain on rotation is unusual and a cause should be determined.

Have you isolated the lower limb? (*Flex knee and push down on knee while pushing up on foot – this provides an axial load through the tibia*) Increase in discomfort may indicate a toddler fracture.

Investigations

A frogs leg review should be requested on children able to understand/tolerate the position

Normal blood results DO NOT completely rule out a septic joint and any clinical suspicion should result in Orthopaedic review (which should be documented)

All x-rays should be reviewed by a senior if the diagnosis of Perthe's or SUFE is being considered

Turn over for condition information

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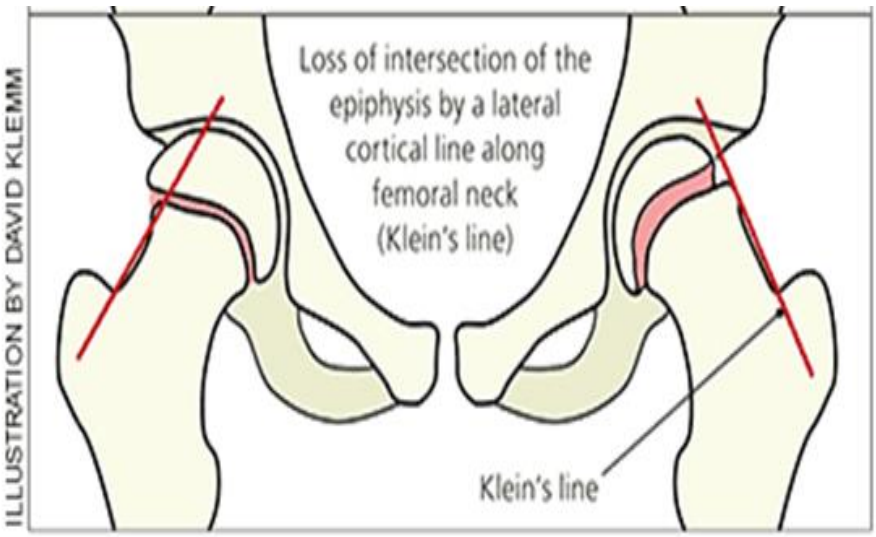
Selected Conditions

Septic Arthritis is uncommon but has the greatest potential for serious complications. Urgent surgical exploration is needed. There is severe pain, often of rapid onset, with limitation of movement. The child is generally toxic, with a pyrexia over 38.5, FBC (over 12 × 109/l) + CRP (over 20 mg/l). Commonly affected joints (hip and knee) and commonest age group is 6 months to 2 yrs. Please see guideline B47/2017

Transient Synovitis (Irritable Hip) Common and usually of insidious onset. May follow a mild viral infection and the child will be afebrile or have a low-grade pyrexia. They are likely to be systemically well and pain free at rest. The symptoms are usually self-resolving after a few days, although they can last up to 4 weeks. X-rays will not show any abnormalities

Perthes Disease This is avascular necrosis of the femoral head, which is then followed by re-vascularisation and re-ossification. Male to female ratio of 5:1 and can be bilateral. Radiographs show femoral head Fragmentation (radiolucency) and re-ossification (radiodensity)

Slipped Upper Femoral Epiphysis (SUFE) Can present as an acute or insidious onset depending on the nature of the slip. The slip is thought to be as a result of the growth acceleration together with altered mechanical properties of the growth plate. The lateral view is most useful for making the diagnosis. Associations have been made with obesity, or conversely being 'long & thin', physical immaturity, and endocrine dysfunction (e. g. hypothyroidism). Males are twice as commonly affected as females and up to 30% of slips will be bilateral. Consequences of a late diagnosis are permanent leg shortening and early OA.



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Education and Training

No specific clinical skills or bespoke training are required to deliver the clinical care suggested in this guideline. It is important staff are aware of high risk presentations as highlighted in the general management section and it is recommended this guideline is highlighted in orthopaedic training session for emergency department staff and paediatric training sessions for orthopaedic staff.

Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Correct referral to orthopaediac teams	Audit	Paediatric Audit Lead	Every 2 years	Local Processes
Appropriate referral to review clinic	Audit	Paediatric Audit Lead	Every 2 years	Local Processes

References

None

Related Guideline: Septic Arthritis in Children B47/2017

Key words

Limp, Child, Injury, Orthopaedics, SUFE, Septic Arthritis