EUSEM 2018 GLASGOW, 8-12 SEPTEMBER
THE EUROPEAN EMERGENCY MEDICINE CONGRESS
EUSEM EUROPEAN SOCIETY FOR EMERGENCY MEDICINE

Risk stratification of atraumatic limp. Before & after: a retrospective cohort study

Drs. Ryan Russell, Jennifer Smith, Alastair Kidd, Julia Mills, Yzzy Del Monte, Emer Timony-Nolan
Royal Hospital for Sick Children, Edinburgh

Background and Aims:

Atraumatic limp is a common presentation to the Paediatric Emergency Department (PED). The majority of children will have benign, self-limiting transient synovitis but the wider differential diagnoses include infective pathologies, neoplasia (particularly leukaemia), Perthes disease and Slipped Capital Femoral Epiphysis.

Our aim was to review the investigation & outcomes of children presenting with atraumatic limp to a PED over a year period, following introduction of a guideline advocating initial investigations only where red flags exist. We compared the data to that from the 12 months preceding introduction of the revised guideline to ensure safety & efficacy.

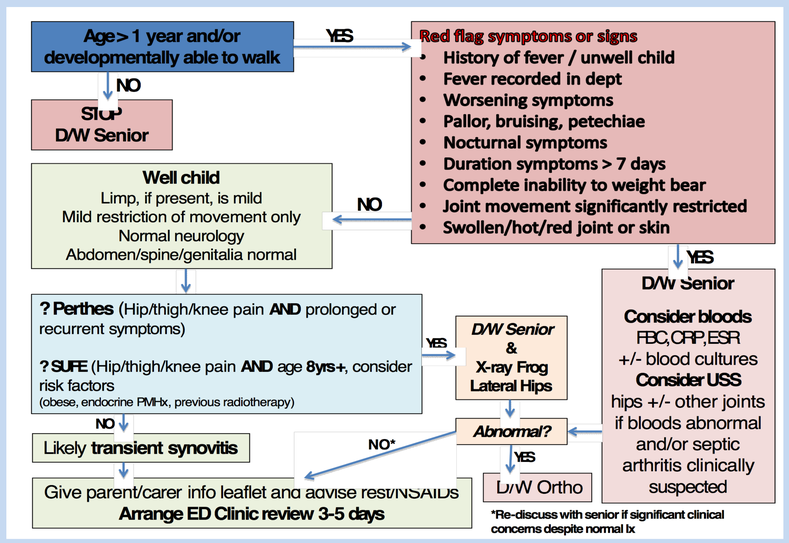

Figure 1: PED flowchart protocol for management of atraumatic limp.

Patients and Methods:

All patients who attended the PED clinic from May 2016-April 2017 with atraumatic limp were manually identified & the following information gathered from the local electronic patient management system: age, sex, presenting complaint, duration of symptoms, examination findings (including ability to weight bear), pyrexia preceding/during PED attendance, blood results, X-ray and ultrasound results, clinical diagnoses and final outcomes. This was compared with results from the 12 months preceding the new guideline when all patients regardless of clinical findings had blood tests & USS.

Results and Discussion:

386 patients attended the PED review clinic with atraumatic limp after introduction of the revised protocol. Of these, 226 patients (59%) had investigations on their first PED attendance, and of those investigated, 93.6% had a documented appropriate red flag reason for doing so. All febrile patients had investigations. 5 patients (1.2%) had duration of symptoms that merited investigation but did not have them performed at first attendance.

30 patients (8%) had a significant pathology (see Fig 2). 23/30 had investigations appropriately at first presentation. Of the 7 that did not, one qualified for duration of symptoms and had a final diagnosis of juvenile idiopathic arthritis.
The remaining 92% had insignificant pathology, chiefly transient synovitis (73%) with a small number of musculoskeletal injuries and occult minor fractures.

Compared to the 498 patients attending in 2014-15, who all had investigations (with significant pathology diagnosed in 10%), we are doing 62% fewer blood tests and 72% fewer ultrasound scans.

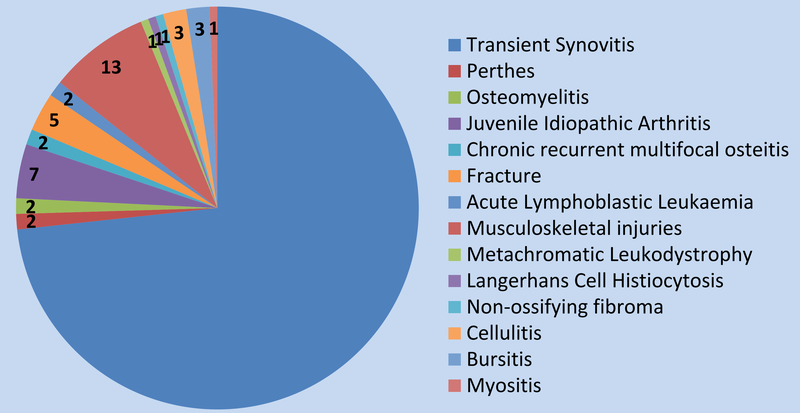

Fig 2: Definitive diagnoses

Conclusion and Perspectives:

Children presenting with atraumatic limp in the absence of red flags can be safely managed at first attendance without blood & radiological investigations. Prevalence of significant pathology in those who do have investigations remains low, but it is pertinent to follow these patients up until symptom resolution or the underlying pathology declares itself, given the serious nature of the conditions we may find.

Acknowledgement :
Dr. Paul Leonard: Data production