Worcestershire Acute Hospitals NHS Trust

Arthritis (PIP)

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The following guidance is taken from the Partners In Paediatrics (PIP)

ARTHRITIS

RECOGNITION AND ASSESSMENT

Definition

- Acute, chronic (≥6 weeks) or recurrent inflammation of ≥1 joint(s)

Acute arthritis associated with fever requires urgent assessment to rule out septic arthritis/osteomyelitis (see* Osteomyelitis and septic arthritis *guideline)

Symptoms and signs

- ≥1 swollen joint(s), which may be:
  - warm
  - stiff +/- painful
  - tender
  - reduced in range of movement

Differential diagnosis

Acute septic arthritis

- See **Osteomyelitis and septic arthritis** guideline

Malignancy

- Malignancy, particularly leukaemia and neuroblastoma, can present with joint pain +/- swelling
- Cytopaenia and hepatosplenomegaly may be absent at presentation

Non-accidental injury (NAI)

- See **Child protection** guideline

Reactive arthritis

- 7–14 days following acute infection
- Self-limiting
- Human leukocyte antigen (HLA)-B27 associated pathogens:
  - campylobacter, shigella, salmonella, chlamydia, *Clostridium difficile*
  - classic Reiter's triad of arthritis, conjunctivitis and sterile urethritis rare in children
- Non HLA-B27 associated pathogens:
  - *H. influenzae*, mycobacteria, *N. gonorrhoeae*, *N. meningitidis*, *Staph. aureus*, streptococci
  - some viral, fungal and parasitic infections

Inflammatory bowel disease associated arthritis

- Monoarthritis in a large joint or peripheral arthritis associated with disease activity

Juvenile idiopathic arthritis (JIA)

- Arthritis of unknown aetiology before aged 16 yr (peak aged 1–5 yr)
- Persisting for ≥6 weeks
- Stiffness especially after rest (e.g. mornings), gradual refusal to participate in usual activities
- Reported pain can be surprisingly minimal (but not always)
- Any or multiple joints

Systemic rheumatic diseases

- Juvenile systemic lupus erythematosus (SLE), juvenile dermatomyositis
- Vasculitis, including Henoch-Schönlein purpura and Kawasaki disease (see **Henoch-Schönlein** guideline and **Kawasaki disease** guideline)

Rarer causes

- Infectious causes – tuberculosis, Lyme disease
- Rheumatic fever – migratory arthritis, erythema marginatum, chorea, history of tonsillitis
- Inherited metabolic disorders e.g. mucopolysaccharidoses
- Haemophilia
- Chronic recurrent multifocal osteomyelitis
- Chronic infantile neurological, cutaneous, and articular (CINCA) syndrome

INVESTIGATIONS

- If monoarthritis and NAI/osteomyelitis/malignancy suspected, X-ray
- Bloods including:
  - FBC and film, ESR, CRP, ASOT
  - if prolonged bleeding, coagulation studies
  - if SLE suspected, ANA
  - if septic arthritis suspected (monoarthritis and fever), synovial aspiration with microscopy and culture +/- joint washout **before** antimicrobial treatment are mandatory (refer to orthopaedics)
- Further imaging e.g. US/MRI may be indicated (seek advice from paediatric rheumatology/orthopaedics)
  - ultrasound can be carried out to look for hip joint effusion – cannot differentiate between transient synovitis and septic arthritis

MANAGEMENT

Primary care

Acute

- Contact local paediatric team for advice on assessment and management of acute musculoskeletal symptoms and pyrexia of unknown origin
- Provide adequate analgesia/anti-inflammatory medications
  - anti-inflammatories contraindicated in gastrointestinal (GI) ulceration/bleeding
    - use with caution in asthma, angioedema, urticaria, coagulation defects, cardiac, hepatic or renal impairment
    - if taking other medicines that increase risk of upper GI side effects, or with serious co-morbidity – give ranitidine or proton pump inhibitor as gastro protection

Chronic

- **Refer all** children with suspected JIA, autoimmune connective tissue diseases (e.g. juvenile SLE, juvenile dermatomyositis, scleroderma and sarcoidosis) to nearest paediatric rheumatology service without delay

If JIA suspected, arrange early referral to local ophthalmologist to commence screening programme for uveitis
Chronic anterior uveitis can be asymptomatic initially, and can progress to irreversible loss of vision if referral delayed

Secondary care

- Explore possible differential diagnoses and manage/refer as appropriate
- If septic arthritis suspected discuss urgently with local orthopaedic team
  - requires urgent joint aspiration, microscopy and culture, followed by IV antibiotics
- Suspected JIA requires prompt onward referral to paediatric rheumatology
- If systemic JIA or autoimmune connective tissue disease suspected, discuss with paediatric rheumatology without delay

Tertiary care

- Management includes:
  - exploring differential diagnoses
  - optimising medical treatment including:
    - corticosteroid injections
    - disease modifying agents e.g. oral steroids, methotrexate, etanercept and other biological therapies
  - disease education
  - physiotherapy, occupational therapy and rehabilitation
  - involvement of other paediatric/surgical specialties as indicated