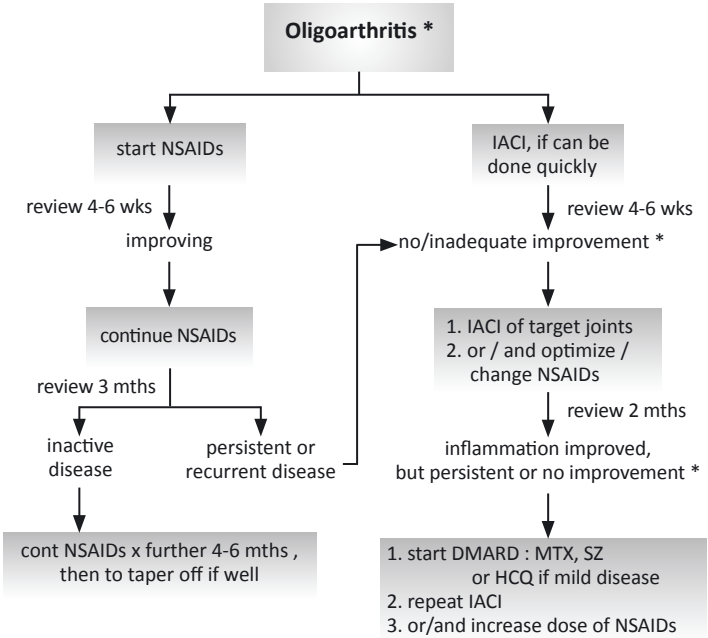


TREATMENT FOR CHILDREN WITH CHRONIC ARTHRITIS

Oligoarthritis (1-4 joints)



Remember to screen for uveitis

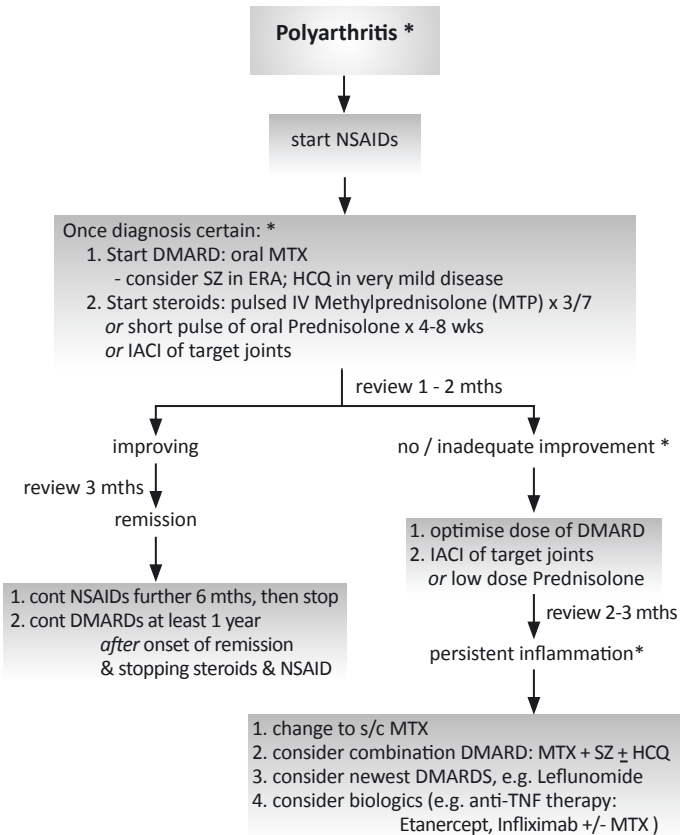
Note:

All patients with persistent inflammation should be on DMARDs within 6 months of diagnosis even if only having oligoarthritis.

Abbreviations *: consider referral to Paeds Rheumatologist / reconsider diagnosis;
IACI : Intra-articular corticosteroid injection; MTX : methotrexate; SZ : sulphasalazine;
HCQ: hydroxychloroquine; DMARD, disease modifying anti-rheumatic drugs.

TREATMENT FOR CHILDREN WITH CHRONIC ARTHRITIS

Polyarthritis (≥ 5 joints)



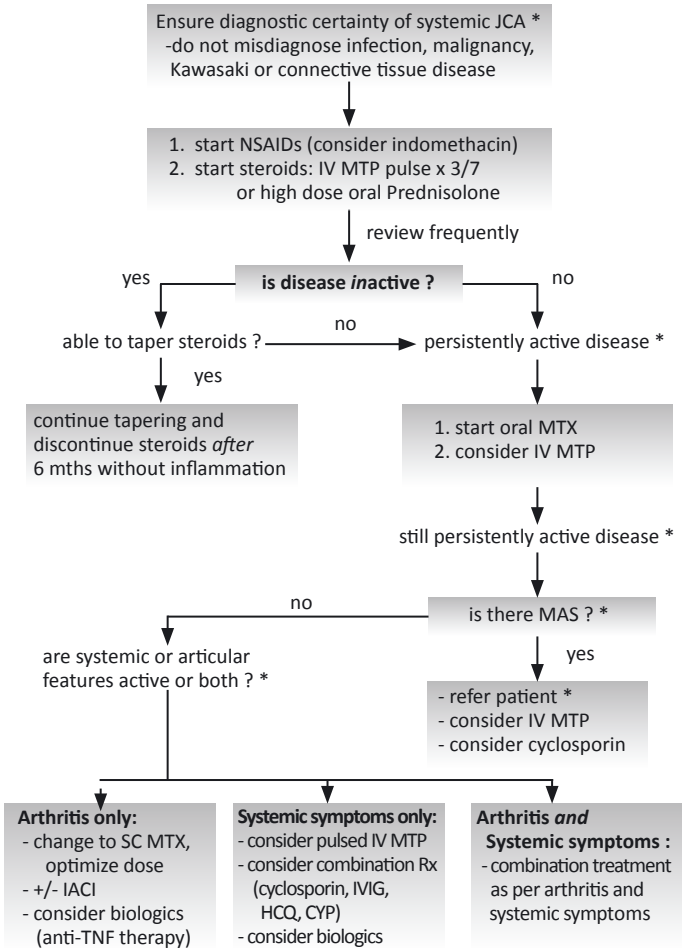
Remember to screen for uveitis

Best opportunity to achieve remission in first two years of disease
Avoid accepting low grade inflammation until all avenues explored

Abbreviations *: consider referral to Paeds Rheumatologist / reconsider diagnosis; IACI : Intra-articular corticosteroid injection; MTX : methotrexate; SZ : sulphasalazine; HCQ: hydroxychloroquine; ERA: enthesitis related arthritis; DMARD, disease modifying anti-rheumatic drugs.

TREATMENT FOR CHILDREN WITH CHRONIC ARTHRITIS

Systemic onset JIA



Remember to screen for uveitis

Avoid gold, penicillamine, SZ and caution with new drugs as risk of developing Macrophage Activation Syndrome (MAS)

Abbreviations - *: consider referral to Paeds Rheumatologist / reconsider diagnosis; IACI : Intra-articular corticosteroid injection; MTX : methotrexate; SZ : sulphasalazine; HCQ: hydroxychloroquine; CYP: cyclophosphamide; IVIG: intravenous immunoglobulins

JUVENILE IDIOPATHIC ARTHRITIS (JIA)

1. Definition

Definite arthritis of unknown aetiology, onset before the age 16 yrs; persists for 6 wks.

Table 1: Symptoms & Signs

articular	extra-articular
joint swelling joint pain joint stiffness / gelling after periods of inactivity joint warmth restricted joint movements limping gait	general fever, pallor, anorexia, loss of weight growth disturbance <ul style="list-style-type: none"> • general – growth failure, delayed puberty • local - limb length / size discrepancy, micromegathia skin <ul style="list-style-type: none"> • subcutaneous nodules • rash – systemic, psoriasis, vasculitis others hepatomegaly, splenomegaly, lymphadenopathy, serositis, muscle atrophy / weakness uveitis – chronic (silent), acute in Enthesitis related arthritis (ERA)
	enthesitis*

* inflammation of the entheses (the sites of insertion of tendon, ligament or joint capsule into bone)

2. Diagnosis and Differential diagnosis : JIA is a diagnosis of exclusion

Table 2. Helpful pointers in assessing articular symptoms:

	inflammatory	mechanical	psychosomatic
pain	+/-	+	+++
stiffness	++	-	+
swelling	+++	+/-	+/-
instability	+/-	++	+/-
sleep disturbance	+/-	-	++
physical signs	++	+	+/-

Table 3: Differential diagnosis of JIA

monoarthritis	polyarthritis
Acute acute rheumatic fever reactive arthritis – post viral/ post enteric / post streptococcal infection septic arthritis / osteomyelitis early JIA malignancy – leukaemia, neuroblastoma haemophilia trauma Chronic JIA – oligoarthritis, ERA, psoriatic chronic infections – TB, fungal, brucellosis pigmented villonodular synovitis sarcoidosis synovial haemangioma bone malignancy	JIA – polyarthritis (RF positive or negative), ERA, psoriatic arthritis reactive arthritis Lyme disease SLE other connective tissue diseases inflammatory bowel disease sarcoidosis familial hypertrophic synovitis syndromes immunodeficiency syndromes mucopolysaccharidoses

Helpful pointers in diagnosis:

- avoid diagnosing arthritis in peripheral joints if no observed joint swelling.
- consider other causes, particularly if only one joint involved.
- active arthritis can be present with the only signs are decreased range of movement and loss of function.
- in axial skeleton (including hips), swelling may not be seen. Diagnosis is dependent on inflammatory symptoms (morning stiffness, pain relieved by activity, pain on active and passive movement, limitation of movement). Investigations to exclude other diagnosis are important.
- in an ill child with fever, loss of weight or anorexia, consider infection, malignancy and other connective tissue diseases.

3. Investigations

The diagnosis is essentially clinical; laboratory investigations are only supportive. No laboratory test or combination of tests can confirm the diagnosis of JIA.

- FBC and Peripheral blood film – excludes leukaemia
- ESR or CRP – markers of inflammation
- X-ray/s of affected joint/s – esp. if single joint involved to look for malignancy
- Antinuclear antibody – identifies a risk factors for uveitis
- Rheumatoid factor – assess prognosis in polyarthritis and need for more aggressive therapy

**Antinuclear antibody and Rheumatoid factor are NOT required to make a diagnosis.*

** Other Ix done as necessary : complement levels, ASOT, Ferritin, immunoglobulins (IgG, IgA and IgM), HLA B27, synovial fluid aspiration for microscopy and culture, echocardiography, bone marrow aspiration.*

4. Management

(i) Medical treatment

- refer management algorithm (*see preceding pages*)

Table 4. Dosages of drugs commonly used in JIA

name	dose	frequency
Ibuprofen	5-10 mg/kg/dose	3-4/day
Naproxen	5-10 mg/kg/dose	2/day
Indomethacin	0.5 - 1 mg/kg/dose	2-3/day
Diclofenac	0.5 - 1 mg/kg/dose	3/day
Methotrexate	10 - 15 mg/m ² /dose (max 25 mg/dose)	1/week
Folic acid	2.5 - 5 mg/kg/dose	1/week
Sulphasalazine	15 - 25 mg/kg/dose (start 2.5 mg/kg/dose & double weekly; max 2 Gm/day)	2/day
Hydroxychloroquine	5 mg/kg/dose	1/day
Methylprednisolone	30 mg/kg/dose (max 1 Gm / dose)	1/day x 3 days
Prednisolone	0.1 - 2 mg/kg/dose	1-3/day

Note: Patients on DMARDs (e.g. Methotrexate, Sulphasalazine) and long term NSAIDs (e.g. Ibuprofen, Naproxen) require regular blood and urine monitoring for signs of toxicity

(ii) Physiotherapy

- avoid prolonged immobilisation
- strengthens muscles, improves and maintains range of movement
- improves balance and cardiovascular fitness

- (iii) Occupational Therapy
 - splinting when necessary to reduce pain and preserve joint alignment
 - to improve daily quality of life by adaptive aids and modifying the environment
- (iv) Ophthalmologist
 - all patients must be referred to the ophthalmologist for uveitis screening (as uveitis can be asymptomatic) and have regular follow-up even if initial screening normal
- (v) Others
 - ensure well balanced diet, high calcium intake
 - encourage regular exercise and participation in sports and physical education
 - family support and counselling when required
 - referral to other disciplines as required: Orthopaedic surgeons, Dentist.

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