# Inflammatory arthritis and connective tissue disease

## *Executive summary*

## Introduction

Rheumatological disorders are difficult to diagnose accurately in our setting and can be difficult to treat, as we are limited by the poor availability of tests and treatments. They are also not common. Despite this, we are able to improve the quality of life and prognosis of most of the patients with the medications we have available.

Rheumatoid arthritis is the most common condition seen. It is a symmetric, inflammatory, peripheral polyarthritis. Untreated, it leads to joint destruction and disability.

Other connective tissue disorders are much less common. However, similar principles can be used to care for these patients.

## Target users

* Doctors

## Target area of use

* Outpatient department

## Key areas of focus / New additions / Changes

This guideline outlines an approach to connective tissue and inflammatory conditions in our setting. It describes the use of methotrexate (the only available DMARD in our setting) and the clinical disease activity index for monitoring progress.

## Limitations

We have no access to autoantibodies and other diagnostic tests. We cannot do CRP routinely.

We have limited access to drugs and no access to biologicals.

## Presenting symptoms and signs

Rheumatoid arthritis presents with joint pain and swelling of the peripheral joints (affecting at least 3 joints), morning stiffness and difficulty performing activities of daily living (ADLs), all lasting at least 6 weeks. Other conditions such as psoriasis, inflammatory bowel disease, SLE should be absent. It is often gradual in onset, but may be intermittent at the beginning. Very occasionally, rheumatoid arthritis may present with a persistent monoarthritis. In these cases, septic arthritis, gout and other explanations must be excluded until a polyarthritis develops.

Extra-articular features of rheumatoid arthritis include anaemia, fatigue, pericarditis, rashes, eye complications, neuropathy, splenomegaly, Sjogren’s syndrome, vasculitis and others. Alternatively, these and other systemic features may reflect another connective tissue disorder.

## Examination findings

* Painful, tender, swollen joints – especially the proximal interphalangeal and metocarpophalangeal joints, the wrists, feet, elbows, shoulders, hip and knees.
* Joint stiffness, pain on motion, limitation of motion
* Rheumatoid nodules
* Typical rheumatoid deformities may be seen in long-standing untreated cases.
* C-spine pain and stiffness, which may eventually lead to instability.

Where an alternative diagnosis is suspected, examine carefully in all systems – paying particular attention to dermatological and musculoskeletal features.

## Diagnostic criteria

For Rheumatoid Arthritis to be diagnosed, there should be any 4 of the following criteria present:

* Morning stiffness for > 1 hour each day
* Arthritis of three or more joints for > 6 weeks
* Arthritis of hand joints
* Symmetric arthritis for > 6 weeks
* Rheumatoid nodules
* Serum rheumatoid factor positive
* Radiographic changes typical of RA

## Investigations

* Plain films of affected joints – may show osteopenia, joint space narrowing and bone erosions. However, they are not helpful if the diagnosis is clinically clear.
* Rheumatoid factor – found in 70-80% of patients (and in 5-10 % of healthy people and 20-30 % of patients with other inflammatory conditions). Helpful, but not essential to the diagnosis.
* ESR – used for monitoring disease activity.
* FBC, U&Es, LFTs and Hep B & C screening – useful to establish baseline values for patients who will start methotrexate.
* Other tests such as CK, U&Es, HIV may be important in excluding alternative diagnoses.

### Further investigation where diagnosis unclear

Further investigations are not available in the Gambia. If patients are interested and able, there are many investigations available in Dakar and a referral should be made to Professor Pouye at Hôpital Le Dantec.

## Management

Patients with probable rheumatoid arthritis and raised ESR should be started on disease modifying treatment (DMARD) as soon as possible.

All patients without contraindications should start on methotrexate.

Contraindications include:

* Women who are pregnant or who want to be pregnant.
* Patients with liver disease or excessive alcohol intake
* Patients with severe renal impairment (eGFR < 30 ml/min)

The presence of respiratory disease is a relative contraindication, so if there are respiratory symptoms, a chest X-ray is helpful to exclude TB or other relevant concerns.

### Disease modifying treatment (DMARD)

Start with **methotrexate** 7.5-15 mg once per week and titrate up as tolerated. Patients who are older, less heavy and with reduced renal function (eGFR < 60 ml/min) should have the lower doses. Increase approximately every 4 weeks to a target dose of 15-25 mg once per week. If these doses are ineffective, the bioavailability can be increased without increasing gastrointestinal side effects by dividing the dose into 2 (taken on the same day once per week).

Patients on methotrexate should have FBC and LFTs checked once every 3 months. A chest X-ray should be done if there is any suggestion of respiratory symptoms.

Patients on methotrexate should take folic acid daily at a dose of 1 mg OD. As we have only 5 mg tablets, dosing once per week is adequate.

Methotrexate should be continued at an effective rate for 3-6 months after the disease enters remission. After this, the dose can be titrated down to the lowest effective level.

Combination DMARD treatment can be used for patients who continue to have high disease activity after 3-6 months of treatment with methotrexate. The methotrexate is continued and **sulfasalazine** and **hydroxychloroquine** are added. Sulfasalazine and hydroxychloroquine can also be used in combination for patients that cannot take methotrexate.

Sulfasalazine is started at 500 mg BD and increased by 500 mg each week to a dose of 1500 mg BD.

Hydroxychloroquine is given at a dose of 400 mg OD (maximum of 5 mg/kg/day).

### Symptomatic treatment

NSAIDS rapidly reduce inflammation and provide pain relief. They should be used for all patients with active disease at maximal anti-inflammatory doses for at least 2 weeks before being withdrawn gradually. Use **ibuprofen** 800 mg QDS (ibuprofen is more effective and has fewer gastric side effects than diclofenac). Consider also given omeprazole 20 mg OD for patients who also receive steroid treatment.

Steroids can be used to rapidly control disease in patients with more severe disease or in patients for whom NSAID treatment is ineffective. Give **prednisolone** 20 mg OD for 1 month. Reduce the dose gradually to a maintenance level of 5-10 mg OD once symptoms settle and wean off completely within 4 months, as successful DMARD therapy is usually seen within 4 to 6 months. Lower doses of glucocorticoid are usually adequate when combined with effective DMARDs.

These treatments can be repeated as necessary for patients experiencing flares of their disease.

### Monitoring disease activity

Various scores are available for monitoring disease activity in rheumatoid arthritis. The Clinical Disease Activity Indicator (CDAI) is simple to calculate and is suitable for our setting.

28 joints are reviewed – 10 proximal interphalangeal joints, 10 metocarpophalangeal joints, 2 wrists, 2 elbows, 2 shoulders and 2 knees. Each should be examined for swelling and tenderness. Estimate out of 10 (where 0 is completely well and 10 is as ill as possible) how ill you think the patient is. Ask the patient the same question.

Now add the number of swollen joints, the number of tender joints, your assessment and the patient’s assessment. This gives a score out of 76.

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| **Activity level** | **CDAI score** |
| Remission | < 2.8 |
| Low disease activity | 3-10 |
| Moderate disease activity | 11-22 |
| High disease activity | > 22 |

## Non-pharmacologic treatment

* Patient education regarding the illness, treatment and prognosis.
* Heat and cold therapies: Heat is an effective modality for the relief of joint pain and stiffness caused by RA. Cold is preferable for treatment of an acutely inflamed joint.
* Orthotics and splints
* Therapeutic exercise: Patients with well-controlled RA should be encouraged to engage in 30 minutes of daily aerobic exercise several times a week. Hand exercises may also be useful.
* Joint-protection education e.g. maintenance of good posture, avoidance of overuse during inflammation, modification of tasks to decrease joint stress
* Nutritional and dietary counselling
* Interventions to reduce risks of cardiovascular disease, including smoking cessation and lipid control

## Key Issues for Nursing care

Patients with inflammatory arthritis should be seen by a doctor whenever possible, given how uncommon it is in the Gambia.

**References**

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