Module 1785
Rheumatoid arthritis

From this module you will learn:

- What rheumatoid arthritis is and how it differs from other joint problems
- How the condition is diagnosed
- How to monitor progression and manage rheumatoid arthritis
- The role that pharmacy can play in supporting this patient group

March

Clinical:

● Rheumatoid arthritis	April 2*
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● Making the most of pharmacy services	April 30

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Small joints such as the wrists and joints in the hand are some of the most commonly affected

Rheumatoid arthritis (RA) can be overshadowed by its more prevalent relative osteoarthritis (OA), but to allow it to do so is paying a great disservice to the estimated 700,000 people in the UK who are affected by RA. Unlike OA, which is generally regarded as the result of everyday wear and tear on the joints, RA is an autoimmune disorder and tends to affect smaller joints. Joints affected by RA include the hands, feet and wrists, rather than the hips or knees. RA is a progressive condition and lifelong in nature.

There is no known trigger for RA, but a range of factors can play a part, including genetics, the hormone oestrogen (which explains why more women than men develop the condition), and smoking. Diagnosis is most common in those aged between 40 and 60 years, although RA may strike at any age.

What is well understood is the physiological process that leads to the symptoms of RA: joint swelling, redness and pain is known to result from inflammation, which leads to the build-up of fluid and cells in the synovium. The synovium - the membrane that lines most of the joints in the body - becomes thickened as a consequence of the inflammation, which then leads to nearby bones, cartilage, tendons and ligaments becoming damaged.

Although the inflammation subsides, the joint capsule does not always return to its original shape, sometimes remaining stretched and unstable. This is what causes the joint deformities associated with RA.

Symptoms and diagnosis

RA can have an abrupt onset. Symptoms may appear suddenly, becoming noticeable over just a few days. More often, the inflammation builds more gradually, over several weeks or months. The affected joint will become painful, swollen and stiff, often in the morning or after a period of inactivity. The joints most frequently affected at this early stage of the disease are the fingers, wrists or balls of the feet.

Systemic symptoms are common, but may be hard to spot as they can be quite non-specific in nature - for example, tiredness, dry eyes, fever, sweating or a reduced appetite. On the other hand, some systemic symptoms, such as the appearance of rheumatoid nodules under the skin around affected joints, may cause more alarm to the patient than arthralgia (joint pain) and may be the reason they seek medical advice.

Most parts of the body can be affected by RA, including the heart, lungs, nerves and blood vessels. Issues such as pericarditis, pulmonary fibrosis, pleurisy, neuropathy and vasculitis can occur during an RA attack - also referred to as active RA.

Diagnosis usually starts with a physical examination of the affected joints, followed by a blood test if RA is suspected. However,

haematology results can be difficult to interpret. Common inflammation markers – such as an accelerated erythrocyte sedimentation rate and raised C-reactive protein level – are to be expected. Despite being the inflammatory markers, rheumatoid factor and anti-cyclic citrullinated peptide are not present in all RA sufferers.

Blood tests are useful in excluding other diagnoses. For example, a raised white cell count can indicate septic, viral or reactive arthritis and a raised uric acid level points towards polyarticular gout. Reduced haemoglobin levels also aid diagnosis of an arthritic condition, as there is a high prevalence of anaemia in this population.

Certain presenting symptoms are useful in differentiating between RA and other conditions:

- a history of psoriasis, back pain or bowel problems suggests seronegative spondyloarthritis
- a butterfly rash, scleroderma or symptoms of Raynaud's disease can point to connective tissue disease.

Joint imaging is an important part of RA assessment, as it gives an indication of the level of joint damage. Other joints, particularly the feet and hands, should also be checked via X-ray or ultrasound, even if the patient is not experiencing any problems. This can further aid diagnosis even if the patient is asymptomatic.

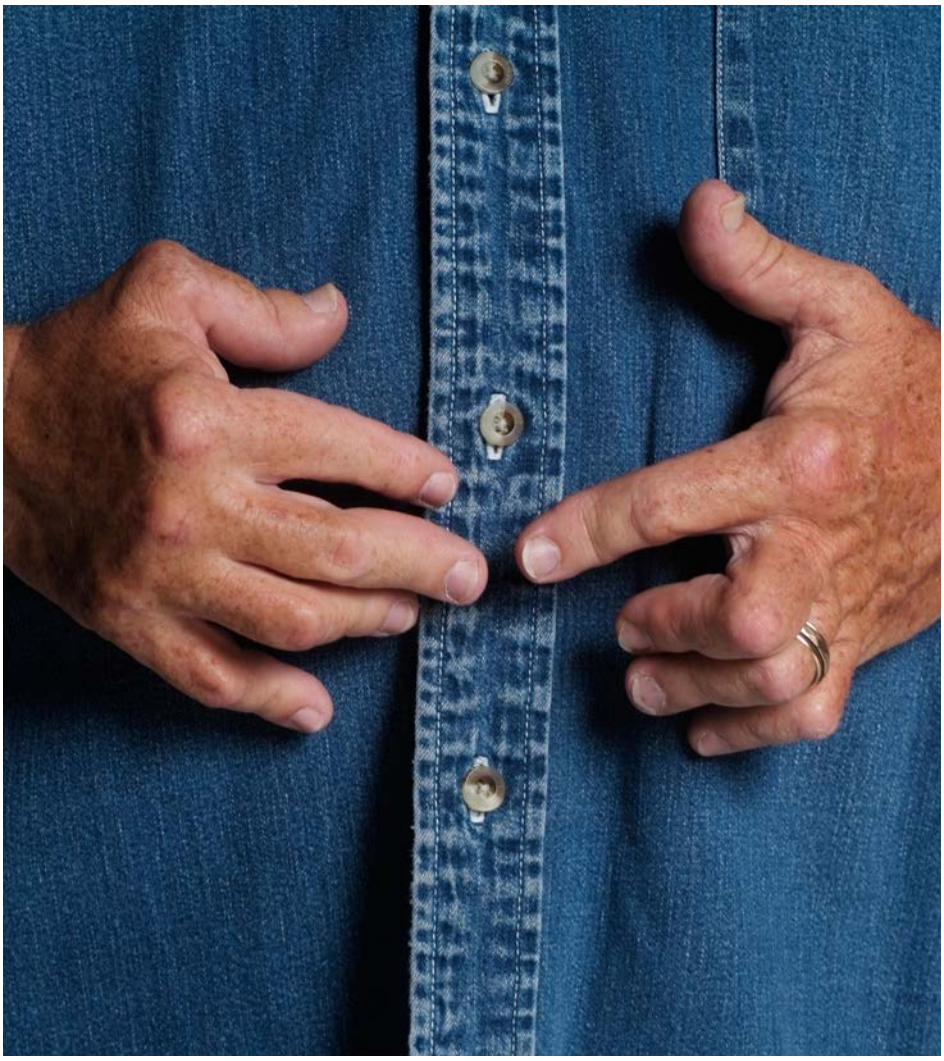
Management

While there is no cure for RA, speedy diagnosis and careful management can make a huge difference to sufferers by keeping a lid on pain and enabling life to be lived to the full. This can enable people to carry on working – around a third of RA patients stop work within two years of the first signs of the disease.

Treatments can slow disease progression and prevent further damage. In addition, they can reduce the risk of developing comorbidities such as osteoporosis, anaemia, infections, cardiovascular issues such as hypertension, malignancy and mental health conditions (most notably depression and anxiety).

Two classes of drugs are used to try and slow the progression of RA:

- Disease-modifying anti-rheumatic drugs (DMARDs) are usually offered as soon as active RA has been established, most commonly methotrexate plus one other agent within the class, such as leflunomide, hydroxychloroquine or sulfasalazine. It can be several weeks before any benefit is felt because the drugs in this class are slow-acting, and two or three combinations may be trialled before an effective mix is found. Once the RA appears stable, the DMARD dose(s) should be gradually decreased to the lowest point at which exacerbations are still prevented.



Nice recommends a variety of hand exercises as patients with RA may have difficulties with dexterity

- Cytokine modulators, sometimes referred to as biological treatments, may be used in combination with a DMARD if monotherapy with a DMARD has not proved effective or if side effects are troublesome. This class of drug – which includes etanercept, adalimumab, infliximab and rituximab – is much quicker-acting, but patients should still be advised that it may take weeks or months for the full effects to be felt. If six months' worth of treatment with a cytokine modulator has not proved beneficial, the therapy should be discontinued. Although included in this drug class, abatacept and anakinra are not recommended for the treatment of RA.

Oral or injected corticosteroids are frequently used during an RA flare-up to hasten a reduction in inflammation while the patient waits for a disease-modifying agent to take effect. Analgesia is also often needed: paracetamol, codeine or a compound preparation should be tried first, replaced with an oral non-steroidal anti-inflammatory drug (NSAID) or cyclo-oxygenase 2 (COX-2) inhibitor at the lowest effective dose for the shortest possible time. If an NSAID is prescribed, a proton pump inhibitor (PPI) should also be given.

Surgery is only recommended when joint damage is so severe that it has resulted in deformity or loss of function, or if pain cannot be managed by other means.

Regular check-ups – at least once a year – are essential for RA patients in order to evaluate symptoms, assess disease progression and compliance with treatment, and check for complications and comorbidities. Check-ups should include blood tests and imaging.

All patients should be under the care of a multidisciplinary team. A team typically has a single named point of contact (ideally a specialist nurse) who the patient can contact quickly with questions about their treatment or if they experience a flare-up of symptoms.

Other interventions that should be part of an RA patient's care plan include:

- physiotherapy to improve flexibility
- muscle strength and fitness
- non-pharmacological pain relief methods, such as hot and cold treatments
- occupational therapy to address difficulties that the sufferer is experiencing with everyday life, such as using assistive devices

in order to maintain independence podiatry.
- A hand exercise programme is also recommended by Nice and can be found at ***www.tinyurl.com/Rheumhand***.

Psychological therapies can make a significant difference. For instance, learning relaxation techniques and cognitive coping skills can help people come to terms both with being diagnosed with the disease and what it means for their life and those of the people around them.

Pharmacy's role

Pharmacy clearly has an important place in dispensing prescriptions and providing continuity and support to RA sufferers, but there is much more the sector can do for this patient group:
- provide information and advice on self-care measures such as: the importance of exercise (both strengthening and aerobic activities); weight reduction if obese or overweight; a healthy diet and pacing (alternating physically demanding tasks with less arduous activities and rest periods)
- advise on assistive devices to help with individual problems, such as fitting tap turners to kitchen and bathroom sinks if the hands are affected, and fitting supportive insoles to footwear to improve comfort when walking
- discuss patient beliefs that dietary changes can make a difference to symptoms; for example a Mediterranean diet will do no harm, but there is no strong evidence that excluding or including certain food groups will help
- ensure patients have access to education, advice and information about their condition and its management - checking regularly if they have any questions or concerns - as these may appear
- signpost to support groups to reduce the sense of isolation felt by many RA patients and their carers
- inform patients that although complementary therapies such as acupuncture or chiropractic treatments may feel helpful in the short-term, there is scant evidence supporting their long-term use and they certainly should not replace conventional management options
- offer relevant clinical services, such as a Medicines Use Review (MUR) in England or Wales (many RA patients are on NSAIDs, which are high-risk medicines and are one of the targeted groups for MURs), the Chronic Medication Service in Scotland (patients on methotrexate are eligible under the high risk medicines initiative), and Managing Your Medicines in Northern Ireland (in the case of RA, accessible to those on high-risk medicines or with adherence issues)
- enquire whether they might benefit from other services, such as prescription collection and delivery if mobility issues exist.

For more information

NHS Choices has a good source of information for patients and carers at ***www.tinyurl.com/Rheumo***

Clinical Knowledge Summaries pull together a range of resources to provide information on conditions and their management at ***tinyurl.com/Rheum1***

The National Institute for Health and Care Excellence has a pathway on RA with links to guidance on assessment, diagnosis and management of the condition at ***tinyurl.com/Rheum2***

There are a number of patient organisations for arthritis sufferers in the UK, which provide information and advice on RA. They include Arthritis Research UK, Arthritis Care, Arthritis Action, the National Rheumatoid Arthritis Society, which can be found at ***tinyurl.com/Rheum4, tinyurl.com/Rheum5, tinyurl.com/Rheum6, and tinyurl.com/Rheum7 respectively***

Take the 5-minute test

1. Rheumatoid arthritis is an autoimmune disorder affecting the large joints such as the hips and knees.
   True or false?
2. RA is more common in men than in women.
   True or false?
3. Diagnosis of RA is most common in those aged between 40 and 60 years.
   True or false?
4. RA symptoms include painful and swollen joints, with stiffness occurring in the morning or after a period of inactivity.
   True or false?
5. Common systemic symptoms of RA include tiredness, dry eyes, fever, sweating or a reduced appetite.
   True or false?
6. Reduced erythrocyte sedimentation rate and low C-reactive protein levels confirm a diagnosis of RA.
   True or false?
7. Treatment of RA slows disease progression, prevents further damage and reduces the risk of developing comorbidities.
   True or false?
8. If six months' worth of treatment with a cytokine modulator has not proved beneficial, the therapy should be discontinued.
   True or false?
9. Disease-modifying anti-rheumatic drugs are usually fast acting and patients will see the benefits within two to three weeks.
   True or false?
10. Non-pharmacological interventions for RA include physiotherapy, occupational therapy, increasing muscle strength, and fitness and podiatry.
    True or false?

Rheumatoid arthritis CPD

Reflect **What are the symptoms of rheumatoid arthritis (RA)? Which groups of drugs are used to slow the progression of RA? What self-care measures can patients use to manage their symptoms?**

Plan **This article contains information for pharmacists about rheumatoid arthritis including its symptoms, diagnosis and management. The role that pharmacy can play in supporting patients with RA is also discussed.**

Act **Find out more about rheumatoid arthritis from the National Rheumatoid Arthritis Society (NRAS) website at tinyurl.com/Rheum8**

Read the useful tips for RA sufferers on the NRAS website at tinyurl.com/Rheum9

Find out about hand exercises for patients with RA on the Everyday Health website at tinyurl.com/Rheum10

Revise your knowledge of drug treatments for RA from the BNF 70, Chapter 10, page 891

Evaluate **Are you now confident in your knowledge of RA and its management? Could you give advice to patients about self-care measures and offer reliable sources of information?**