The changes in medical and surgical treatment of rheumatoid arthritis

Bill Ledingham

Bill Ledingham is a Consultant Orthopaedic Surgeon based in Aberdeen since 1992. He trained in surgery in Glasgow, Edinburgh, Aberdeen and Bath. He worked as a Consultant in General Trauma and Orthopaedics with a special interest in Rheumatoid Surgery, retiring from NHS clinical practice in 2019. He continues to carry out lower limb surgery at Albyn Hospital, Aberdeen.

Rheumatoid arthritis (RA) is a chronic inflammatory disorder that primarily affects joints but can also have systemic effects on other organs. It is an autoimmune condition, the immune system mistakenly attacking the body's own tissues. This leads to inflammation in the joints, causing pain, swelling, stiffness, and significant joint damage over time.

Symptoms often include:

- Joint pain and tenderness
- Swelling in the joints
- Stiffness, especially in the morning or after prolonged inactivity
- Fatigue
- Fever
- Weight loss

RA can affect people of all ages, but it more commonly occurs in middle-aged individuals and is more prevalent in women. The exact cause of rheumatoid arthritis is not fully understood, but a combination of genetic, environmental, and hormonal factors is believed to contribute to its development.

In the past, before the advent of modern disease-modifying antirheumatic drugs (DMARDs) and biologic therapies, many patients experienced severe joint deformities, instability and a loss of function that greatly complicated surgical management. Surgeons often had to contend with compromised soft tissues and osteoporotic bone.

Additionally, the high risk of infection due to chronic immunosuppressive therapy made surgical outcomes less predictable, and the disease's tendency to affect multiple joints required highly specialised surgical techniques.

Today the widespread use of DMARDs have fundamentally changed the surgical landscape for rheumatoid patients. With better disease control, patients experience less deformity, joint destruction, and systemic involvement, making surgeries more successful and recovery faster.

However, the need to carefully manage immunosuppression during the perioperative period remains critical, as RA treatments, especially biologics, can increase the risk of infections. Whilst disease control has improved, RA can still affect various organ systems, requiring a multidisciplinary approach to care. Surgeons today benefit from a better understanding of the disease's progression and the evolving pharmacological treatments that can influence both surgical timing and techniques.

This subspecialty section contains three articles that reflect the changes in the medical and surgical treatment of the rheumatic diseases and the changes in post-operative rehabilitation. Alan MacDonald, recently retired as a Consultant Rheumatologist, outlines the history and development of drug treatment of this group of diseases. Usefully, in his section, there is a guide that outlines the current thinking on pausing treatments such as the biologics prior to surgery.

Tracy Ward, a physiotherapist, writes about the changed physiotherapy needs of the rheumatoid patient over the last few decades with emphasis on enabling them to lead as normal a life as possible and describes the use of equipment both historic and modern which aids daily life and speeds recovery after surgery.

I write about the benefits of these changes with reference to the rather greater surgical challenges we were faced with and describe some new operative techniques that have led to better functional outcomes.

Overall, the future looks much brighter for patients diagnosed with rheumatic disease whether they have RA or any other rheumatic condition. Significant progress continues in the development of new drugs and improved surgical techniques, and there is every reason to believe that the next 20 years will bring as many ground breaking advancements as the past two decades. ■