

RHEUMATOLOGY

Targeting rheumatic diseases

In rheumatic diseases, the body's defence system attacks itself, resulting in chronic illness and multiple complications. New targeted therapies promise to treat such autoimmune conditions more effectively.

Rheumatic diseases include many autoimmune diseases. This refers to conditions that cause inflammation in the joints, muscles and other bodily systems. They include rheumatoid arthritis, systemic lupus erythematosus, ankylosing spondylitis and Sjogren's syndrome. If not controlled, they can not only cause muscle pain and joint deformity, but also organ failure.

In the past, a more conventional and conservative approach to tackle the pain and inflammation associated with these conditions involved a combination of steroids and non-steroidal anti-inflammatory drugs (NSAIDs). While effective in offering symptomatic relief, these drugs have significant side effects and are not able to prevent disease progression.

Zeroing in on inflammation

Advancements in science, spurred by a better understanding of the inflammatory process, has led to more targeted therapies that aim at the mechanisms causing inflammation.

These drugs do more than address pain and inflammation; they also reduce the risk of joint damage and other complications. They can even push the disease into a state of inactivity known as remission. Often known as disease-modifying anti-rheumatic drugs (DMARDs), they interrupt the immune response that triggers inflammation. So they can slow or stop the progression of autoimmune diseases. Depending on the condition, DMARDs may be prescribed together with NSAIDs or glucocorticoids (steroids).

For older DMARDs, patients will need to take these for up to six months to benefit from the full effect of the drugs. Common examples of such DMARDs include:

- Hydroxychloroquine (Plaquenil)
- Sulfasalazine (Salazopyrin)
- Leflunomide (Arava)
- Methotrexate

Biological drugs

Newer drugs known as Biologic Response Modifiers are becoming popular. They are



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Like DMARDs, biologics can change or modify rheumatic diseases and impede or prevent damage. However, where traditional drugs broadly affect the immune system, biologics target specific components of the immune system. By focusing on specific molecules, such as T or B cells, of the immune system, they block the actions of these overactive cells and dampen the excessive inflammatory process that causes pain, swelling and tissue damage.

Several types of biologics are available and classified according to the molecules they target. They include:

- Tumour Necrosis Factor (TNF) inhibitors (also called anti-TNF agents)
- B cell inhibitors
- T cell inhibitors
- Interleukin-6 (IL-6) inhibitors
- Interleukin-17 (IL-17) inhibitors
- Janus kinase (JAK) inhibitors

Biologics take full effect in about two to six weeks, depending on the drug. While most are administered by injection or intravenous infusion, JAK inhibitors are usually taken as pills. Biologics are also more expensive than conventional DMARDs.

Weighing the pros and cons

DMARDs, including biologics, act on the immune system by design, so the main side effect is that they weaken the immune system's ability to fight infections. This is why patients on these drugs need to take extra care to reduce their risk of infection. Regular blood tests are also recommended to monitor the drug's impact on the body.

While this is a common safety concern among patients taking these drugs, it is usually acceptable to them as the benefits far outweigh the risks. Clinical trials have shown strong evidence that DMARDs such as biologics reduce the progression of joint erosion and reduce the risk of chronic pain, deformity and disability. The ability to push the disease into remission also means other serious complications related to rheumatic conditions, such as organ damage, can be avoided.

As with most medications for chronic illness, it is important to adhere to the regime recommended. These drugs do not offer a cure for autoimmune diseases; rather, they check their progress and reduce complications. If the patient stops taking these drugs, symptoms may return. It is important to also be consistent with medical follow-ups so that the effect of the drug therapy can be monitored and adjusted according to the severity of the condition. [🔗](#)