**Definition:** rheumatoid arthritis from *The Macquarie Dictionary*

1. a chronic autoimmune disease marked by inflammation of the lining of the joints, frequently accompanied by marked deformities, and causing damage to the bone and cartilage.

**Summary Article:** rheumatoid arthritis from *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Inflammation of the joints. A chronic progressive disease, it begins with pain and stiffness in the small joints of the hands and feet and spreads to involve other joints, often with severe disability and disfigurement. There may also be damage to the eyes, nervous system, and other organs.

The disease is treated with a range of drugs and with surgery, possibly including replacement of major joints.

Rheumatoid arthritis most often develops between the ages of 30 and 40, and is three times more common in women than men. It is an autoimmune disease and thus some of the recently developed treatments involve drugs which deactivate those parts of the immune system responsible for tissue damage. In the West it affects 2–3% of women and nearly 1% of men. In children rheumatoid arthritis is known as Still's disease.

**Symptoms** Rheumatoid arthritis affects the whole body. Degeneration of the 'collagen' component of the fibrous connective tissues occurs. This degeneration is common to all connective tissue diseases. Rheumatoid arthritis usually starts slowly with general ill health, tiredness, anaemia, loss of weight, and painful stiffness. Occasionally onset may be sudden, with a raised temperature and joint pains resembling an acute infective arthritis or rheumatic fever. Next the small joints of the hands and feet become swollen and painful, then the larger joints become involved, sometimes even the spine. The pain and stiffness are worse in the mornings and after rest, easing after movement. Muscle wasting and general loss of weight follow. The flexor muscles retain greater power than the extensors, and their pull, unless corrected, causes flexion deformity of the joints. This, together with the swelling of the joints and the marked muscular wasting, gives the typical deformity of severe rheumatoid arthritis. The inflammatory process in rheumatoid arthritis starts in the synovial membrane of the affected joints and later spreads to the joint capsule, the adjoining tendons, and the joint cartilage. Fibrous tissue replaces normal tissue, resulting eventually in disorganization of the joint and sometimes complete ankylosis (fixation). The pain, particularly on attempted movement, is considerable. It is difficult to forecast the course of the disease. Remissions alternating with exacerbations occur. Pregnancy and jaundice inhibit its progress. About 50% of cases remain stationary for many years, while other cases become progressively worse. The mode of onset gives no indication of the subsequent progress of a case.

**Treatment** Rheumatoid arthritis cannot be cured but various treatments exist to alleviate the symptoms. Treatment may consist of rest and in preventing, by splinting and other means, the development of deformities. Physiotherapy encourages active and passive movements and generally maintains muscle tone. It is essential to build up the general and psychological condition of the patient.

Cortisone and other steroids, such as prednisone, have proved of benefit in relieving acute cases, and it is a great help to the patient's morale to be free for a time from distress. Steroid therapy may also be valuable in tiding a patient over an exacerbation of the disease. The use of these drugs is, however, contra-indicated in certain conditions such as heart failure, diabetes, high blood pressure, renal disease, and tuberculosis, and they must always be given with caution.

Analgesics (pain-killing drugs) and anti-inflammatory drugs help to relieve the symptoms. While aspirin remains the most widely used analgesic, anti-inflammatory drugs such as phenylbutazone, indomethacin, and ibuprofen also have their place, and may bring considerable relief from pain.

A group of unrelated antirheumatic drugs are used to slow down progression of the disease. These include the substances methotrexate, cyclosporine A, D-penicillamine, and several TNF inhibitors.

At a late stage in rheumatoid arthritis the joint changes often progress to those of arthroplasty, causing further disability. In recent years the use of total joint replacements (see arthroplasty) in the hand, hip, and knee in particular, has meant that many people with rheumatoid arthritis have been able to maintain some degree of pain-free mobility.
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