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GLOBAL YEAR AGAINST MUSCULOSKELETAL PAIN

OCTOBER 2009 – OCTOBER 2010

Rheumatoid Arthritis

Introduction

Rheumatoid arthritis (RA) is a chronic, progressive autoimmune disease of unknown cause. It is characterized by persistent inflammation that primarily affects the peripheral joints. It usually starts as an insidious symmetrical arthritis and has an unpredictable and variable course, although pain and disability can be minimized if the condition is recognized early and treated promptly and appropriately.

Epidemiology and Economics

- Prevalence varies from 0.5% to 1.5% of the population.
- RA affects more women than men (ratio 3:1).
- The age of onset is between 30 and 55 years.
- RA results in progressive disability, with nearly half of all patients experiencing significant functional impairment within 10 years.
- RA shortens life expectancy by a number of years in both men and women.

Pathophysiology

- Pathogenesis involves multiple factors, including both genetic and environmental influences.
- Immune cells and soluble inflammatory mediators play a crucial role in the pathogenesis, although the relative contribution of individual components remains uncertain.
- Proliferation of cells in the synovial layer of the joint, together with infiltration by various cell populations, as orchestrated by cytokines, chemokines, growth factors, and hormones, produces a locally invasive pannus that is capable of invading and ultimately destroying cartilage, bone, and surrounding soft tissues.

Clinical Features

- RA presents as a symmetrical polyarthritis affecting the small joints of the hands and feet.
- The onset is most often insidious but can be episodic or acute.
- Inflamed joints become swollen, painful, and stiff. Synovial fluid may accumulate, causing an effusion. Joint pain is usually more prominent and more persistent than in osteoarthritis, occurring at rest, at night, and on activity. Prolonged early morning stiffness is also a key diagnostic feature suggestive of inflammatory disease.
- In addition to causing peripheral symptoms, RA may also involve the cervical spine, causing pain in the neck and occipital headache.
- Pain may also occur as a result of temporomandibular joint disease.
- Uncontrolled disease eventually results in inflammation spreading beyond the synovium of the joint to other nearby structures, including the tenosynovium of tendons, ligaments, other soft-tissue structures, and bone. Subcutaneous nodules can occur in more severe disease and are associated with a worse prognosis.
- Extra-articular features are common and may involve multiple organs, including the skin, eyes, lungs, and blood vessels.

Diagnostic Criteria

The diagnosis of RA is usually based on criteria established by the American College of Rheumatology. To be diagnosed as having RA, a patient must meet four or more criteria, which include:

1. Morning stiffness in and around the joints lasting at least 1 hour
2. Soft-tissue swelling of three or more joints
3. Swelling of the proximal interphalangeal joints, metacarpophalangeal joints, or wrist joints
4. Symmetrical arthritis
5. Subcutaneous nodules
6. A positive test for rheumatoid factor
7. Radiographic evidence of erosions or periarticular osteopenia in the hand or wrist joints

Diagnosis and Treatment

- Early referral for a specialist's opinion is recommended for any patient with RA or suspected synovitis of undetermined cause.
- Effective communication and education are vital, together with ready access to a multidisciplinary team.
- Analgesics and nonsteroidal anti-inflammatory drugs can alleviate pain but have no effect on disease progression.
- Conventional disease-modifying or biological antirheumatic drugs are recommended, ideally within the first 3 months of diagnosis; therapy should include methotrexate and at least one other disease-modifying agent, plus short-term glucocorticoids.
- Regular monitoring should be performed, both for therapeutic efficacy and for drug toxicity, using inflammatory markers and other key components of disease activity.
- A regular check should be made for comorbidities including hypertension, ischemic heart disease, osteoporosis, and depression.
- A surgical opinion should be sought early on if the patient does not respond to nonsurgical therapy.
- Psychological therapy that incorporates coping strategies, relaxation therapy, education on disease and treatments, and stress management skills reduces pain and improves function.
- Physical therapy is effective in management of rheumatoid arthritis; there is evidence to support aerobic and strengthening exercises, transcutaneous electrical nerve stimulation, and ultrasound.

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