

RHEUMATOID ARTHRITIS: CAUSES, SYMPTOMS, AND MODERN
TREATMENT APPROACHES

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Abstract: Rheumatoid arthritis (RA) is a chronic, autoimmune systemic inflammatory disease that primarily affects the joints. It can also damage other organs such as the heart, lungs, skin, and eyes. This article highlights the main clinical features, pathogenesis, diagnostic methods, and treatment strategies for rheumatoid arthritis.

Keywords: rheumatoid arthritis, autoimmune, joint inflammation, DMARDs, biologic therapy.

Introduction

Rheumatoid arthritis is a chronic inflammatory disease of autoimmune origin that primarily affects small joints symmetrically. The disease often begins between the ages of 30 and 50 and is 2 to 3 times more common in women than in men. Delayed diagnosis and inadequate treatment may lead to disability, reduced quality of life, and potentially life-threatening complications due to internal organ involvement.

1. Epidemiology

Globally, rheumatoid arthritis affects approximately 0.5–1% of the population. In countries like Uzbekistan, Russia, and other Central Asian regions, official data may be limited, but the prevalence is similar to global statistics. Women are affected 2–3 times more often than men.

2. Pathogenesis

The development of rheumatoid arthritis is largely due to autoimmune mechanisms. The immune system mistakenly produces autoantibodies (such as rheumatoid factor – RF and anti-CCP antibodies) that attack the synovial tissue of the joints. This stimulates the release of pro-inflammatory cytokines (e.g., TNF- α , IL-6), leading to joint swelling, synovial membrane thickening, and eventual joint deformity and immobility.

3. Clinical Symptoms

Rheumatoid arthritis typically presents with the following symptoms:

Joint pain, especially morning stiffness lasting over an hour

Symmetrical joint swelling, often in fingers and toes

Fatigue, weight loss, loss of appetite

Low-grade fever

In severe cases, it may involve the heart (pericarditis), lungs (pleuritis), skin (rheumatoid nodules), and eyes (scleritis)

4. Diagnostic Criteria

Diagnosis is based on the following:

Clinical signs: joint pain, prolonged morning stiffness, symmetrical joint involvement

Laboratory tests:

Rheumatoid factor (RF)

Anti-CCP antibodies

CRP and ESR (indicators of inflammation)

Imaging: X-ray, MRI, or ultrasound to detect joint damage

5. Treatment Approaches

The main goals of rheumatoid arthritis treatment are to reduce inflammation, suppress disease activity, and prevent disability.

A. Medications:

NSAIDs – reduce inflammation and pain (e.g., ibuprofen, naproxen)

DMARDs (Disease-Modifying Anti-Rheumatic Drugs) – methotrexate, sulfasalazine, leflunomide

Biologic agents – TNF- α inhibitors (e.g., etanercept, adalimumab), IL-6 inhibitors

Glucocorticoids – for short-term control of inflammation and swelling

B. Lifestyle Changes:

Balanced and healthy diet

Maintaining physical activity

Physical and occupational therapy

C. Surgery:

In severe cases of joint deformity, joint replacement surgery may be necessary

Conclusion

Rheumatoid arthritis is a long-term, serious condition that can be managed effectively with early diagnosis and individualized treatment strategies. With proper medical care and healthy lifestyle habits, many patients can live full and active lives despite the disease.

References (APA format)

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