

CLINICAL AND IMMUNOLOGICAL FEATURES OF THE COURSE OF RHEUMATOID ARTHRITIS AND THE DYNAMICS OF SYSTEMIC INFLAMMATION INDICATORS DURING THE USE OF BASIC, BIOLOGICAL AND TARGETED DRUGS

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Relevance. Rheumatoid arthritis (RA) is a chronic systemic autoimmune disease characterized by progressive damage to the synovial membranes of the joints, the development of erosions, and functional impairment. Despite advances in modern rheumatology, optimization of therapeutic approaches remains a pressing issue, as a significant proportion of patients exhibit induced or primary drug resistance. Therefore, studying the clinical and immunological characteristics of the disease progression under various therapeutic strategies is of significant scientific and practical interest for the development of personalized treatment approaches.

The aim of the study was to conduct a comprehensive analysis of the characteristics of the course and treatment of patients with rheumatoid arthritis using synthetic disease-modifying drugs (sDMARDs), biological drugs (bDMARDs) and targeted synthetic drugs (tsDMARDs), as well as to identify priority immunological factors in the development of the disease.

Materials and methods of research. The study included 150 patients with a verified diagnosis of rheumatoid arthritis, aged over 18 years, and 30 healthy controls. All patients underwent a clinical examination using X-ray, ultrasound, and magnetic resonance imaging of their joints. Disease activity and acute inflammation markers were assessed. Immunological monitoring was performed using an enzyme-linked immunosorbent assay and monoclonal antibodies to determine levels of tumor necrosis factor alpha (TNF- α), interleukin-6 (IL-6), and interleukin-17A (IL-17A), as well as T- and B-lymphocyte subsets in peripheral blood. The data were processed using statistical methods to determine the significance of differences.

The results indicate that patients with rheumatoid arthritis exhibit marked dysregulation of cellular and humoral immunity, manifested by a significant increase in levels of the proinflammatory cytokines TNF- α , IL-6, and IL-17A compared to the control group. The use of biological and targeted agents was associated with a more pronounced and sustained reduction in systemic inflammation, a decrease in cytokine levels, and stabilization of T-cell and B-lymphocyte homeostasis compared to monotherapy with synthetic disease-modifying agents. A direct correlation was established between baseline immunological parameters and the rate of clinical response to therapy, allowing them to be considered prognostic markers.

Conclusion. Immunological markers can serve as additional objective criteria for assessing rheumatoid arthritis activity and predicting the effectiveness of treatment. Comprehensive analysis of cytokine profiles and lymphocyte subsets facilitates more accurate patient stratification and optimized therapeutic approaches, which is especially important in clinical practice.