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The Importance of Studying the Effect of Nosteroid Anti-Inflammatory Drugs on the Adrenal Gland in Patients With Rheumatoid Arthritis

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Relevance of the study. Nosteroid anti-inflammatory drugs (NYAQDV) are used as the most commonly used analgesic therapy. They are distinguished by a clear mechanism of action, proven efficiency, ease of Use and possibility. In some chronic rheumatic diseases, Nyaqdvs play the role of an important pathogenetic agent that not only relieves symptoms, but also affects the development of the disease. Treatment with RA disease is carried out throughout the life of the patient. It is based on anti-drug anti-inflammatory therapy based on the use of a wide range of drugs, which differ significantly in structure, pharmacological properties and mechanisms of action. In the last decade, several innovative genetic engineering biologics (GEBPS) for the treatment of RA - monoclonal antibodies and recombinant proteins have been specially developed that block the activity of anti-inflammatory basic cytokines and/or the pathological activation of immune-natured inflammatory process in this disease cells of the immune system. The use of biologically active drugs not only significantly improved the results of treatment, but also expanded the understanding of the pathogenetic mechanisms of the development and development of RA. However, the sharp improvement in prognosis depends not only on the introduction of innovative drugs, but also on the improvement of the pharmacotherapy strategy for RA using standard disease-altering anti-inflammatory drugs (DMARDs), primarily methotrexate (MTX). Methotrexate (MTX) is a first line drug that has been proven to be effective and safe in the treatment of RAni. Doktorova S.According to A and co-authors (2024) studied the effect of methotrexate on the adrenal gland of white non-breeding rats. It was found that the width of the cortex in the experimental group increased significantly by 2.89% compared to control indicators on Day 15.Methotrexate (MTX) is a first line drug that has been proven to be effective and safe in the treatment of RAni. Doktorova S.According to A and co-authors (2024) studied the effect of methotrexate on the adrenal gland of white non-breeding rats. It was found that the width of the cortex in the experimental group increased significantly by 2.89% compared to control indicators on Day 15. This was due to a statistically significant increase in the studied indicator of the fascicular zone in relation to the same parameter in the control group. Later, the width of the cortex decreased by 4.76% (30 days) and 4.13% (60 days) compared to control. In 30 days, the glomerulosa zone index decreased by 2.5%, while the fasciculata zone decreased by 6.72%. On the 60th day, the difference in the width of the fascicular zone was 5.63% of the parameters of the

control group.ater, the width of the cortex decreased by 4.76% (30 days) and 4.13% (60 days) compared to control. In 30 days, the glomerulosa zone index decreased by 2.5%, while the fasciculata zone decreased by 6.72%. On the 60th day, the difference in the width of the fascicular zone was 5.63% of the parameters of the control group. Morphometric properties of Glomerulosa zone cells did not have statistically significant differences compared to control data. It has been observed that areas of corticocytes in the Fasciculata zone and reticularis and their nuclei undergo significant changes. The area of Zona fasciculata cells grew by 10.05% (15 days) and their nuclei by 10.27% (7 days) and 11.62% (15 days). On Days 30 and 60, the reverse trend was found: the cell area decreased by 8.21% and 6.65%, while the nuclear Area decreased by 12.68% and 7.85%, respectivel.

The linear features of the mesh zone of the adrenal gland have changed in a similar way. Cell area increased by 2.17% (7 days) and 7.41% (15 days) and then decreased by 5.51% (30 days) and 3.86% (60 days) compared to control properties.he linear features of the mesh zone of the adrenal gland have changed in a similar way. Cell area increased by 2.17% (7 days) and 7.41% (15 days) and then decreased by 5.51% (30 days) and 3.86% (60 days) compared to control properties. The area of the adrenocorticocyte zone reticularis nuclei was significantly higher by 12.1% compared to control in the study group on the 15th and decreased by 12.58% and 7.83% on the 30th and 60th, respectively. In the study of the adrenal glands during all periods of observation, the nuclear-cytoplasmic ratio did not have significant differences and formed: in the glomerulose zone - from 0.27±0.017 to 0.34±0.019; in the Light Zone - from 0.13±0.005 to 0.19±0.006; in the reticular zone - from 0.21±0.0007 to 0.24±0.003.n the study of the adrenal glands during all periods of observation, the nuclear-cytoplasmic ratio did not have significant differences and formed: in the glomerulose zone - from 0.27±0.017 to 0.34±0.019; in the Light Zone - from 0.13±0.005 to 0.19±0.006; in the reticular zone - from 0.21±0.0007 to 0.24±0.003. Apparently, the administration of methotrexate directly affects the endocrine glands due to the fact that, on the one hand, it is an inhibitor of dihydrofolate reductase (which leads to a violation of the synthesis of DNA and other products in the cell). In the adrenal glands, this leads to hypersecretion with the subsequent accumulation of cholesterol in adrenocorticocytes, which serves as a substrate for the synthesis of glucocorticoids.n the adrenal glands, this leads to hypersecretion with the subsequent accumulation of cholesterol in adrenocorticocytes, which serves as a substrate for the synthesis of glucocorticoids. Thus, the study of the morphological structure of the adrenal glands using modern methods made it possible to determine the exact changes in the morphological state of the adrenal glands after the use of methotrexate, as shown by the dynamics of the studied parameters.

Conclusion. Despite the development of Medicine, the etiology and pathogenesis of most rheumatic diseases (RCS) is not fully understood. Studies in recent years have shown that the preclinical period of a systemic autoimmune reaction is associated with impaired immune interaction with sinanthropic microflora. In recent decades, special attention of doctors has been paid to the violation of human microbiocenosis and its role in the development of autoimmune diseases. Evidence has been obtained for a theory showing that altered sinanthropic microflora is a factor in initiating and maintaining chronic inflammation in rheumatoid arthritis and spondyloarthritis.

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