DETERMINATION OF EARLY JOINT STRUCTURE REMODELING IN VITAMIN D DEFICIENCY IN PATIENTS WITH RHEUMATOID ARTHRITIS

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In rheumatoid arthritis (RA), a representative of autoimmune diseases, a statistically significant superiority of patients with osteopenia symptoms was noted. Because of the chronic immune-inflammatory process underlying RA, long-term use of glucocorticoids poses a risk of bone remodeling. In this case, the biochemical processes of bone resorption, as well as the formation of articular destruction on the basis of systemic inflammation, are stimulated. Therefore, overall osteoporosis in RA is now considered an indicator of the severity of the systemic inflammatory process underlying the disease. In addition, vitamin D deficiency has also been reported to affect immunological processes involved in the pathogenesis of osteoporosis and systemic inflammation.

The objective of the study: to determine the early remodeling of the joint structure due to vitamin D deficiency in patients with rheumatoid arthritis.

Material and research methods: 95 RA patients aged 18-49 (38.1±13.3), with an average disease duration of 6.1±1.9 years, were included in the study. 76 of them (80%) were women. Patients were divided into four groups, group I - in the range of "70-100 ng/ml" without vitamin D deficiency (n=15); Group II - vitamin D deficiency was not observed in the range "30-70 ng/ml" (n=18); Patients with group III - vitamin D "suboptimal status - 10-29 ng/ml" (n=32) and group IV - vitamin D "deficiency status - <10 ng/ml" were included (n=30). 20 healthy individuals (average age 37.2±7.1 years) were selected for the control group.

Results: the clinical appearance of RA in four groups differed from each other by some indicators. Patients with RA of groups III and IV differed from patients of groups I and II with a clear clinical picture of joint syndrome. In them, the average number of swollen and painful joints was found to be significantly, i.e. 2 times more, compared to patients in groups I and II ($p<0.05$). In turn, the duration of morning sickness did not differ statistically significantly ($r>0.05$) between groups. Inflammatory markers - C-reactive protein and erythrocyte sedimentation rate were higher in all groups and did not differ statistically significantly, but activity indices SDAI and DAS28 had higher values based on vitamin D deficiency.

Conclusion. Thus, in patients with RA, the amount of PYD and BAP is increased from the early stages of remodeling in joint tissues formed on the basis of vitamin D deficiency.