МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ

ЗАПОРІЗЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

Наукове товариство студентів, аспірантів, докторантів і молодих вчених

ЗБІРНИК ТЕЗ ДОПОВІДЕЙ

«НАУКОВОЇ КОНФЕРЕНЦІЇ СТУДЕНТІВ ЗДМУ – 2020»

в рамках І туру «Всеукраїнського конкурсу студентських наукових робіт з галузей звань і спеціальностей у 2019 – 2020 н.р.»

06 – 07 лютого 2020 року

Запоріжжя – 2020

ОРГАНІЗАЦІЙНИЙ КОМІТЕТ

Голова оргкомітету:
ректор ЗДМУ, проф. Колесник Ю.М.

Заступники голови:
проректор з наукової роботи, проф. Туманський В.О., голова Студентської ради Турчиненко В.В., проф. Разнатовська О.М., голова Наукового товариства студентів, аспірантів, докторантів і молодих вчених, д.біол.н. Павлов С.В.

Члени оргкомітету:
заступник голови Студентської ради Подлужний М.С., голова навчально-наукового сектору Студентської ради Москалюк А.С., заступники голови навчально-наукового сектору Будагов Р.І., Скоба В.С.

Секретар: Брезицька К.П.

BONE-CARTILAGE RESORPTION IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS

Butskiy V.

The most important characteristic feature of rheumatoid arthritis (RA) is systemic disorganization of connective tissue with early disruption of its matrix metabolism, which is clinically manifested by chronic progressive erosive-destructive polyarthritis. A sharp disruption of the exchange of structural proteoglycans, collagen and bone resorptive processes arise as a result of the action of various damaging mechanisms of inflammation in RA, including cytokine activation.

Objective: The purpose of this work is to study the significance of bone-cartilage resorption as an integral indicator of inflammatory-destructive processes in patients with early RA.

Material and Methods: 78 patients with a reliable, according to the criteria of the American Rheumatological Association, diagnosis of RA aged from 20 to 65 years were examined. Patients were assessed the quantitative content and qualitative composition of glycosaminoglycans (GAG) in blood serum, and studied excretion of GAG in urine, calculating the concentration per 1 g of creatinine. Oxiproline (OP) and its fractions (free (OPf), protein-bound (OPp) and protein-bound (OPp) hydroxyproline) were determined in serum and urine.

Results: Analysis of the obtained data showed that in patients with minimal activity of the inflammatory process (IP), the content of GAG in serum was statistically significantly higher by 43.1%, compared with the control group. The level of excretion of GAG in urine did not depend on the degree of activity in RA, although it was significantly higher than normal even with minimal activity. At the same time, the fractional composition of excreted GAGs in the urine varied in RA patients, as evidenced by a significant decrease in the sulfated GAG content by 35% compared to the control group, although the differences between the groups were statistically unreliable.

Bone remodeling markers, C-terminal telopeptides of collagen type I serum, also proved to be almost 3 times higher in RA than the level of healthy individuals, in which the indicated index was 0.15 ng / ml.

In the RA patients examined, a statistically significant increase in the level of the collagen degradation marker - OP along with an increase in the concentration of the PG metabolite - GAG was detected. No significant differences were found in the evaluation of OPf and OPp, although there was a tendency to decrease the content of OPf and increase OPp when compared with those of the control group.

Conclusions:

1. The level of the biochemical marker of bone resorption - C-terminal telopeptides of collagen type I serum was elevated even in individuals with early RA, indicating the activity and generalization of the processes of osteoporosis.
2. The content and qualitative composition of GAG in the blood serum adequately reflect the clinical features of the disease, being a sensitive integral test that reliably attests to the severity of inflammatory-destructive changes in the tissues of the affected joints and increases depending on the degree of activity and the timing of debut of the disease.