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Evaluation of morphofunctional changes in patients with Rheumatoid arthritis associated with arterial hypertension

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In recent decades there was a distinct increase of interest in the cardiovascular system in autoimmune diseases and their related complications. Correlation of arterial hypertension (AH) with Rheumatoid arthritis (RA) is particularly topical.

Objective of study: To evaluate the morphofunctional changes of myocardium in patients with Rheumatoid arthritis associated with arterial hypertension.

Information and methods: Main group comprised 40 patients (with average age of 39.6 ± 41) with Rheumatoid arthritis by reliable diagnosis of ACR criteria (1987). The average duration of disease is 4.3 years, systolic blood pressure level >160 mm Hg, diastolic blood pressure level >100 mm Hg; first group consisted of 20 patients with Rheumatoid arthritis associated with arterial hypertension, second group consisted of 20 patients with Rheumatoid arthritis not associated with arterial hypertension and third one, the control group consisted of 20 practically healthy persons. It was revealed that in the examined patients left ventricular end-diastolic dimensions (LVEDD), the relative thickness of posterior wall and interventricular septum at diastole were significantly different from those of control group ($p < 0.001$), where the end-diastolic volume was higher in patients of 1st group ($p < 0.05$). Myocardial mass index (MMI) in patients of the 1st group was higher than that of 2nd and control groups ($p < 0.05$). Where upon, in patients of 2nd group LVMI was associated with the maximum activity of Rheumatoid arthritis ($DAS28 > 6.3$). Stroke and minute volume in Group I were higher compared with 2nd and control groups ($p < 0.05$), where cardiac index increased, but not significantly different from control and 2nd groups ($p < 0.05$). In patients of 1st group, who had high degree of activity of Rheumatoid arthritis ($DAS28 > 5.2$), disorder of LV diastolic function was revealed. At the same time, systolic myocardial function in patients included in the study was not malfunctioned. Thus, the performed analysis shows that the development of LV diastolic dysfunction in Rheumatoid arthritis has multi-focal characteristics and associated factors can make some contribution.

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