



## EVALUATION OF IMMUNO-INFLAMMATORY RELATIONSHIPS IN PATIENTS WITH CHRONIC HEART FAILURE AND RHEUMATOID ARTHRITIS

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**Purpose.** The aim of the study was to assess the relationship between manifestations of immune inflammation and dyslipidaemia and myocardial morphofunctional parameters in patients with chronic heart failure (CHF) with preserved left ventricular ejection fraction (CHF-EFV) in seropositive rheumatoid arthritis (RA).

**Material and methods.** The study included 57 women with CHF as a result of coronary heart disease and/or arterial hypertension. All patients had NYHA functional class I and II. All patients were divided into comparable groups: the first included 31 patients with a combination of CHF and seropositive RA, the second included 26 patients without RA. Patients with RA had low to moderate DAS28 activity. The diagnosis of CHF was verified according to ESC criteria, the diagnosis of RA according to EULAR/ACR criteria (2010). In patients with RA the baseline anti-inflammatory drug used was methotrexate in an average dose ( $12.9 \pm 2.5$  mg/week). Comparative analysis of basic laboratory and instrumental parameters used at diagnosis and monitoring of CHF, as well as the correlation of manifestations of immunoinflammatory process with dyslipidemia, was carried out in the studied groups. and indicators of diastolic myocardial dysfunction.

**Results.** Total cholesterol levels averaged  $4.4 \pm 0.9$  mmol/l in the CHF group without RA and  $5.2 \pm 2.2$  mmol/l in the CHF and RA group ( $p=0.09$ ); triglycerides,  $1.9 \pm 0.7$  and  $1.5 \pm 0.9$  mmol/l ( $p=0.3$ ); low density lipoproteins (LDL-C) -  $2.6 \pm 0.8$  and  $3.1 \pm 1.1$  mmol/l ( $p=0.04$ ); high density lipoproteins (HDL-C) -  $1.3 \pm 0.2$  and  $1.3 \pm 0.1$  mmol/l respectively ( $p=0.7$ ). A direct correlation between methotrexate intake (mean dose was  $12.9 \pm 2.5$  mg/week) and HDL-C levels was found in RA CHF group:  $R=0.3$ ;  $R^2=0.1$ ;  $F=0.9$ ; ( $p=0.01$ ). In the CHF and RA group, there was a statistically significant correlation between the ratio of transmitral flow parameters with DAS28 and RF level:  $R=0.5$ ;  $R^2=0.3$ ;  $F=2.6$  ( $p=0.04$ ).

**Conclusions.** Against the background of the immune inflammatory process caused by RA, a significant increase in LDL level, which may negatively influence the course of dyslipidemia in CHF patients. There was an increase of HDL concentration on the background of methotrexate treatment in CHF-HF and RA group. A direct correlation between the ratio of transmittent flow parameters and RF and DAS28 levels was found. It is possible that this relationship influences the progression of diastolic left ventricular myocardial dysfunction in the CHF CHF and RA, but prospective studies are needed to clarify its role.