Abstract: The characteristics of dyslipidemia in rheumatoid arthritis

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Introduction: Rheumatoid arthritis (RA) and dyslipidemia as the manifestation of atherosclerosis have the same mechanisms of development that causes cardiovascular complications.

Purpose is to evaluate the characteristics of dyslipidemia in women depending on the duration of RA.

Materials and Methods: The study included 201 women, 33% of them had early RA lasting less than 1 year. The RA was diagnosed by the criteria ACR/EULAR 2010. Statistical analysis of the results was performed with "Statistica 10" software.

Results: Dyslipidemia was revealed in patients with early RA in 68% (RA in 65%). In addition, the increase in total blood cholesterol (TBC) in early RA - 61% (in RA-55%) was always associated with the disorder of other components of the lipid profile. In early RA the mean value of total cholesterol was higher in 0.2 and a maximum value in 1.4 times than in RA (3.2 (5.5) 10.2 and 3.5 (5.3) 7.2 mmol/L) (p<0.05). Increased level of triglycerides (TG) in early RA was 1.5 times more frequent 51%, (in RA-33%), the mean value was 1.9 mmol/L in early RA (1.6 mmol/L to RA). Increased level of low-density lipoproteins (LDL) was 1.8 times more frequent in early RA-62%, (34% in RA), the mean value was 3.2 mmol/L in early RA, (2.6 mmol/L in RA), decreased high-density lipoproteins (HDL) level was 2.3 times more frequent in early RA-55% and (24% in RA) (p<0.05). Atherogenic coefficient was 63% in early RA, (53% in RA) (p<0.05). Erythrocyte sedimentation rate (ESR) was 1.3 times more frequent in early RA–100%, (80%-in RA), C-reactive protein (CRP) showed 10% difference -71% in early RA, (61% in RA) (p<0.05). CRP was 1.2 times higher in early RA than in RA, the mean value in early RA was 23 mg/L (19 mg/L in RA). The correlations between total cholesterol and CRP (r=0.23, p<0.05), LDL and CRP (r=0.21, p<0.05) were revealed.

Conclusion: Thus, dyslipidemia in early RA presents the following characteristics: increased blood atherogenicity (the increase of LDL in 1.8 times, TG in 1.5 times, the decrease of HDL in 2.3 times), the average TBC was higher in 0.2 times and a maximum value in 1.4 times in early RA (p<0.05). There is a correlation between the level of TBC, LDL and the markers of systemic inflammation (p<0.05). The contribution of chronic immune-inflammatory processes in the development of dyslipidemia is observed more frequently in early RA in 1.2 times (p<0.05).