of the brain vessels etc. Patients with rheumatic diseases also have an elevation of endothelin-1 in serum. But it remains unclear whether the endothelin-1 level may reflect endothelium dysfunction in patients with antiphospholipid syndrome (APS) and serves as an early marker of atherosclerosis.

**Objectives:** The aim of the study was to evaluate the endothelin-1 concentration, its association with antiphospholipid antibodies and atherosclerotic vascular lesions in patients with APS.

**Methods:** According to our observation, there were 82 patients, among which 34 (41.6%) with primary antiphospholipid syndrome (PAPS) and 48 (58.4%) with secondary antiphospholipid syndrome (SAPS). The control group consisted of 37 practically healthy persons. The groups of patients were comparable by age, sex, and duration of the disease. The APS diagnosis was established according to the international classification criteria (2006). The content of the anticardiolipin antibodies IgG, anti-beta2-glycoprotein-1 antibodies IgG, IgA, IgM and endothelin-1 was determined by the immune enzyme method using commercial sets of Trinity Biotech Captia USA - Ireland, ORGenTec GmbH Germany and -Endothelin-1- (Cormay, England). All patients were assessed for the level of endothelium-dependent vasodilatation (EDVD), the thickness of the intima-media complex of the common carotid artery (IMT), the presence of atherosclerotic plaque (AP) and clinical manifestations of vascular involvement.

**Results:** The analysis of endothelin-1 levels has showed that its content was in 2.3 times higher in patients with APS than in the control group. The proportion of people with optimal endothelin-1 content was twice lower, and the proportion of people with extremely high and high rates was 1.6 and 5.3 times higher, respectively, among patients with APS, than in the control group. Also differences in the endothelin-1 level have been established depending on the type of APS. The content of endothelin-1 was significantly higher, (1.3 times) in patients with SLE, than in PAPS. Among the patients with SAPS, the proportion of patients with an optimal level of endothelin-1 was 1.7 times lower, and the proportion of patients with high levels was 1.6 times higher than in patients with PAPS. The significantly lower endothelin-1 level was recorded in patients with highly positive antibodies to cardiolipin and beta-2 glycoprotein-1. Correlation analysis has shown direct correlation between anticardiolipin antibodies of the IgG class and anti-beta2-glycoprotein-1 antibodies and endothelin-1 concentration (r=0.35 and 0.34). High endothelin-1 level was an adverse factor of structural and functional atherosclerotic changes of the heart and blood vessels in patients with APS. IMT increasing and EDVD decreasing were from 1.7 to 6.8 times more frequent among patients with high endothelin-1 level (>10 pg/ml), than with patients with optimal endothelin-1 level (<5.0 pg/ml).

**Conclusion:** Thus, the obtained data has showed that the excess concentration of endothelin-1 is a circulating marker of early atherosclerosis, since it is closely associated with subclinical manifestations of atherosclerotic vascular damage.

**Disclosure of Interests:** None declared

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