

HYPOLIPIDEMIC AND ENDOTHELIAL DYSFUNCTION-CORRECTING EFFECTS OF ROSUVASTATIN

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BACKGROUND: Despite great achievements in modern medicine, cardiovascular pathologies (CVD) remain the leading cause of mortality in many countries of the world. Endothelial dysfunction and dyslipidemia are two of the main causes of coronary artery sclerosis.

The aim of the present work was to study the hypolipidemic effect of the lipid-correcting preparation rosuvastatin (Crestor), as well as its endothelium dysfunction-controlling effect in patients with stable angina pectoris.

MATERIALS AND METHODS: We studied 69 patients (46 males, 23 females, age range 43 to 61 years, mean age 56 ± 5.2 years) with stable angina pectoris. Mean indices of T-C, HDL-C, LDL-C, TG and endothelin-1 (ET-1) were 270.46 ± 26.69 mg/dL, 33.42 ± 3.21 mg/dL, 183.06 ± 22.4 mg/dL, 274.84 ± 33.74 mg/dL and 0.62 ± 0.12 , respectively. Patients were treated with rosuvastatin 10 mg once daily for 2 weeks. Besides routine examinations, flow-mediated vasodilatation of the brachial artery, according to changes in diameter after 2 –minutes of occlusion, was performed prior to and 24 hours after rosuvastatin administration.

RESULTS: Analyses of the data obtained revealed statistically evident differences between the results obtained pre- and post-treatment initiation (2 weeks treatment course). For T-C, HDL-C, LDL-C, TG and ET-1, post-treatment levels were 152.74 ± 19.94 mg/dL, 35.46 ± 5.84 mg/dL, 87.28 ± 18.04 mg/dL, 162.08 ± 19.63 mg/dL ($p < 0,001$) and 0.55 ± 0.05 ($p < 0.01$), respectively. A statistically evident difference was revealed in the degree of flow-mediated vasodilatation of the brachial artery between pre- and post-treatment (7.171 ± 0.71 % vs 10.20 ± 0.96 %; $p = 0.18$) indices.

CONCLUSION: Rosuvastatin treatment (10 mg daily) has significant clinical and lipid-controlling effects, decreases levels of ET-1 in peripheral blood, and 24-hour post single dose administration was observed to increase the degree of flow-mediated vasodilatation of the brachial artery, which is very important in patients with stable angina pectoris.

Key words: Rosuvastatin, Dyslipoproteinemia, Endothelin-1