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ABSTRACTS

The level of PCSK9 in patients with familial hypercholesterolemia

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Abstract
Aim: Proprotein convertase subtilisin kexin type 9 (PCSK9) is a key regulator of lipids metabolism by its ability to facilitate the degradation of LDL receptor (LDLR). Familial hypercholesterolemia(FH) is an autosomal codominant inherited disorder caused in most cases a mutation in the gene coding for the LDLR and characterized by very high plasma concentrations of low density lipoprotein cholesterol (LDLc). We studied the levels of PCSK9 and its correlation with the lipids, C-reactive protein, homocysteine and fibrinogen in untreated FH patients and their first-degree and second- degree relatives without FH.
Materials and Methods: We compared the PCSK9 levels in 60 FH patients (59 patients with heterozygous form FH, one patient with homozygous form FH) and 29 healthy relatives of 1 and 2-degree relatives, without FH. All patients with FH did not take lipid-lowering therapy 3 months or more. The level of PCSK9 in plasma were determined by ELISA. Data are presented as median (25 – 75 percent).
Results: We show that the PCSK9 level was significantly higher in FH patients 258,77 (221,67-299,17) ng / ml compared to their healthy relatives 193.83 (166,44-220,29) ng / ml ($p < 0.001$) and that it correlated with age ($r = 0.22$, $p = 0.049$), total cholesterol ($r = 0.55$, $p < 0,001$), LDL-C ($r = 0.51$, $p < 0.001$), triglycerides ($r = 0.3$, $p = 0.006$) and fibrinogen ($r = 0,3$, $p = 0,01$).
Conclusion: PCSK9 new, potentially promising plasma marker that reflects the degree of lipid metabolism in FH patients
Keywords: PCSK9, familial hypercholesterolemia.

The correction of lipid metabolism and markers of inflammation by diet and hmg-coa reductase inhibitors in patients with a different forms of hyperlipidemia

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Objective: To estimate the possibility of correction (by diet and HMG-CoA reductase inhibitors lovastatin) lipid metabolism and inflammatory markers in patients with familial hyperlipidemia (FH) and polygenic hypercholesterolemia (PH).
Material and Methods: A clinical and laboratory assessment of the effects of diet for 12 weeks in 30 patients with FH and 17 patients with PH, estimate the effects of lovastatin therapy in a dose of 20 mg / day for 12 weeks – 15 patients in each group.
Results: There were thesignificantly decreased of triglycerides (11.7%) and glucose (7.9%) serum in FH group and significantly decreased total cholesterol (7.6%), TG (8.1%), LDL (7.9%) and CRP (14%) in PH group. Lovastatin therapy (20 mg daily) in patients with FH accompanied by a significant decrease in of total cholesterol level, LDL cholesterol and apo B serum to 15.6%, 25.8% and 18.6%, respectively. In PH group lovastatin therapy resulted in a decrease total cholesterol by 17.6%, LDL by 24.5%, a significant increase in HDL of 9.2% and high sensitivity CRP reduction of serum to 16.6%.

Conclusion: The diet and lovastatin therapy lets to achiev a hypolipidemic effect in patients of both groups, whereas the anti-inflammatory effect was observed only in PH group.
Keywords: coronary heart disease, lovastatin, family hyperlipidemia, triglycerides.

Statins in the treatment of chronic heart failure

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Abstract
While there has been considerable progress in treatment of chronic heart failure, this pathology is still prognostically unfavorable disease. The Scientifics are not yet able to agree on whether to use statins in CHF. Data on the efficacy and safety are contradictory and require clarification, because patients with heart failure are systematically excluded from most large trials with statins. Given that the reduction of LDL is not the only mechanism for the positive effect of statins in patients with CHF, attaches great importance to pleiotropic effects of this class of drugs.
Keywords: statins, cholesterol, chronic heart failure, pleiotropic effect of statins

Inhibition of cholesterol absorption in the enterocytes

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Abstract
The article describes mechanisms of influence on the absorption of cholesterol. Author describes the limitations of monotherapy and the advantages of using a combination of statin and ezetimibe.

Keywords: ezetimibe, cholesterol absorption, Niemann–Pick type 1-like protein 1