

Atherosclerosis and Dyslipidaemias
An official Journal of the Russian National Atherosclerosis Society (RNAS)
2013 №1 (10)
ABSTRACTS

Clinical immunology of atherosclerosis – from the theory to practice.

Arabidze G. G.

A.I.Evdokimov's Moscow State Medical and Dental University

Abstract

This review describes the current data on the pathogenesis of atherosclerosis, the theoretical background of community and the relationship of immuno-inflammatory and lipid theory of this disease, the possibility of use in medical practice modern methods of diagnosis of subclinical atherosclerosis and its manifestations. The modern trends in the application of new knowledge on the pathogenesis of atherosclerosis in the primary and secondary prevention, drug treatment of the coronary heart disease.

Keywords: atherosclerosis, immunology, cytokines, chemokines, lymphocytes, statins, inflammation, coronary heart disease, acute coronary syndrome.

Application of photodynamic therapy in the pathology of the vascular wall

Ephremova Yu. E., Soboleva G. N., Karpov Yu.A., Tararak E. M.

Russian Cardiology Research Complex

Abstract

Authors consider the possibility of using photodynamic therapy for the treatment of diseases of the vascular wall. The mechanisms of photodynamic therapy are described. The results of studies on the treatment of primary atherosclerosis and restenosis in experimental animals with photodynamic therapy and clinical trial results of this method in humans.

Keywords: photodynamic therapy, photosensitizer, atherosclerotic plaque, restenosis, atherosclerosis.

Residual risk in patients treated with statins from the very high risk group of development atherogenic dyslipidemia. A prospective study "CRYSTAL" Part 1: Purpose, objectives, design, and baseline characteristics of the included patients.

Zubareva M. Yu. Rozhkova T. A., Gornyakova N. B., Solov'eva E. J., Kukharchuk V. V., Amelyushkina V. A., Kotkina T. I., Titov V. N., Susekov A. V.

Russian Cardiology Research Complex

Abstract

This article is the first publication of data of a prospective, observational study "CRYSTAL" - the study of residual risk in patients with very high risk of cardiovascular disease and atherogenic dyslipidemia, treated with statins. The description of the purpose, objectives, design,

and baseline characteristics included major patients. The data are compared with the results of Russian and International Studies of residual cardiovascular risk factors.

Keywords: residual risk, atherogenic dyslipidemia, statins, CRYSTAL, prospective study.

Optimal antiplatelet therapy in patients with acute coronary syndrome, undergoing to primary percutaneous coronary angioplasty.

Goloshchapov-Aksenov R. S.1, Lebedev A. V.2, Merkulov E. V.3

1Reutov's Clinical Hospital, 2 Mytishi' Clinical Hospital, 3Russian Cardiology Research

Abstract

The article presents the results of primary percutaneous coronary angioplasty (PCA) in treatment of patients with acute coronary syndrome (ACS), the efficacy, safety and the need for ticagrelor in order to preoperative preparation. During the period from March to July 2012 PCA urgently completed 78 patients with ACS, with pre-preparation antiplatelet therapy with ticagrelor. Pre-loading dose was 180 mg. Results of treatment of patients showed high efficiency PCA in ACS. Preoperative use of ticagrelor reduced the risk of intraoperative and postoperative complications, the frequency of intraoperative use of inhibitors IIb / IIIa receptor inhibitors, and reduce treatment costs.

Keywords: acute coronary syndrome, antiplatelet therapy, primary percutaneous coronary angioplasty, ticagrelor.

Mutations' level detection of mitochondrial genome G14459A in homogenates of the human aortic intima

Egorova L. A, Sobenin I. A, Postnov A. Yu. Sazonova M. A, Barinova V. A, Sinjov V. V, Chichewa M. M, Mitrofanov K. Yu., Zhelankin A. V, Hasanova Z. B, Egorova L. A, Sobenin I. A, Postnov A. Yu.

Russian Cardiology Research Complex, Institute of General Pathology and Pathophysiology

Abstract

Objective: The aim of this study was the pilot analysis of the heteroplasmy level for mutation G14459A of human mitochondrial genome.

Materials and Methods: The DNA samples were isolated from total homogenates of normal and affected by atherosclerosis aortic intima of individuals by a method of the phenol-chloroform extraction. After PCR the amplicates were pyrosequenced to identify the percent of heteroplasmy.

Results and discussion: A single nucleotide substitution G14459A was analyzed. The mutation is localized in the coding region of the mitochondrial genome, in particular, in the gene NADH dehydrogenase subunit 6. It causes a defect of the protein subunit of mitochondrial respiratory chain enzyme, leading to dysfunction of the NADH dehydrogenase and possibly to oxidative stress in the body. It was found that the level of heteroplasmy for this mutation is significantly higher in total homogenates of affected by atherosclerosis intima compared to homogenates of normal intima.

Conclusion: According to the data resulting from the study, G14459A mutation is associated with atherosclerotic lesions of human aortic intima.

Keywords: intima, aorta, heteroplasmy, NADH dehydrogenase, atherosclerosis.

Safety of statins in the treatment of patients with high risk of cardiovascular complications and hepatic pathology

Drapkina O. M., Korneeva O. N.

I.M. Sechenov First Moscow State Medical University

Abstract

This article shows the safety of statin's therapy in patients with non-alcoholic fatty liver disease, as well as in obese patients. The authors demonstrated data own clinical observations of patients with high risk of cardiovascular disease and liver pathology.

Keywords: non-alcoholic fatty liver disease, statins