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ABSTRACTS

A patient after an episode of acute coronary syndrome. Lipid control after the acute coronary syndrome

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Resume

The review presents the recent data of clinical guidelines on the approved algorithms of lipid-lowering therapy prescription in patients with acute coronary syndrome. We indicated the targeted levels of lipid profile, which allow judging the treatment efficacy, as well as the difficulties faced by practitioners while prescribing high-intensity statins. The possibilities of combined therapy are identified for the management of patients of this category (additional prescription of ezetimibe and PCSK9 inhibitors). The review presents the positions of the approved consensus of the European Society of Cardiology specifying the approaches to lipid-lowering therapy in acute coronary syndrome. The available materials from foreign library databases (Library's MEDLINE / PubMed database) were used to prepare the review.

Keywords: acute coronary syndrome, statins, risk, ezetimibe, PCSK9 inhibitors.

Lipoprotein(a): diagnosis, pathogenetic and clinical significance

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Abstract

Despite the active treatment of statins in patients with cardiovascular diseases and the achievement of target values of lipoproteins, the number of repeated myocardial infarctions, restenosis inside the stent, progression of coronary heart disease (CHD) does not decrease. This review of foreign and domestic literature presents modern views on the role of lipoprotein(a) in the development of coronary heart disease, aortic stenosis, the development of cardiovascular events. Elevated Lp(a) levels are considered a genetically determined risk factor for cardiovascular diseases. Lp(a) consists of an apolipoprotein B-containing low-density lipoprotein (LDL)-like particle, covalently linked to the plasminogen-like glycoprotein apo(a). The level of Lp(a) is genetically controlled by LPA gene. To date, several types of interventions have been developed for reducing Lp(a) levels. Three of them are successful: therapy with proprotein convertase subtilisin kexin type 9 inhibitors (PCSK9), lipid apheresis, antisense therapy.

Keywords: coronary heart disease, lipoprotein(a), aortic valve stenosis, apolipoprotein(a).

Efficacy, safety and tolerability of long-term therapy with rosuvastatin and its fixed combination with lisinopril and amlodipine in patients with high and very high cardiovascular risk according to an observational study of ANICHKOV

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Abstract

The article presents the results of a prospective, observational, multicenter, 12-month study ANICHKOV.

Aim: to assess cardiovascular risk in patients undergoing 12 months of follow-up in patients in Moscow and the Moscow Region with hypercholesterolemia and a comparative analysis of adherence, efficacy and safety of various forms of combination therapy in outpatient practice, including the fixed drug lisinopril/ amlodipine/rosuvastatin.

Materials and methods: persons over 18 years old with a total cholesterol level ≥ 7.5 mmol/l or/and HS- LDL ≥ 5.0 mmol/l (according to results from the Invitro laboratory) were invited to participate in the study. Initially, in the lipid center, those with high and very high cardiovascular risk (n = 702) were recommended to correct risk factors with an emphasis on combination therapy with amlodipine/lisinopril/rosuvastatin (0–12 months). At regular visits, when patients did not reach the target levels of LDL and/or blood pressure, the dose was titrated. Additional therapy with fenofibrate 145 mg/day was recommended for patients with a TG level of more than 2.3 mmol/l.

Results: according to the analysis, 659 patients completed the study in accordance with the protocol. At the same time, target levels of cholesterol-LDL less than 2.5 mmol/l and less than 1.8 mmol/l reached 16.6% and 5.6% of patients, respectively. The blood pressure level of less than 140/90 mm Hg when treating fixed combinations of amlodipine/lisinopril/rosuvastatin and amlodipine/lisinopril was in 83.7% and 80.8% of compliant patients, respectively. At the same time, target levels of blood pressure and LDL-LDL of less than 2.5 mmol/l reached 14.5% in the amlodipine/lisinopril/rosuvastatin group and 13.1% of patients in the amlodipine/lisinopril group and less than 1.8 mmol/l in the LDL-LDL group – 5.8% and 5.1%, respectively. Therapy was well tolerated and adherent.

Conclusions: despite the high adherence of patients to treatment with a fixed combination of drugs and, as a result, a decrease in the proportion of individuals with an increased risk of SSO, the effectiveness of the simultaneous correction of LDL and BP levels remains insufficient.

Keywords: hyperlipidemia, arterial hypertension, cardiovascular risk, combination therapy.

Evaluation of long-term results of stenting of the unprotected left main coronary artery depending on the severity of the coronary anatomical lesion

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Abstract

Objective: to evaluate the long-term results of stenting of the unprotected left main coronary artery (LMCA) in patients of different risk according to Syntax score.

Materials and methods: 282 patients who underwent stenting of unprotected LMCA were included in the follow-up. The average follow-up period was 34.6 months. Depending on the severity of the lesion, the patients were divided into low (< 22 points on the Syntax score, n= 135), medium (23–32 points, n= 93) and high-risk groups (>33 points, n= 54).

Results: the overall incidence of adverse cardiovascular events was significantly higher in the high-risk group (37%) compared with patients with Syntax < 22 (10.4%) and Syntax 23–32 (9.7%), $p < 0.0001$. Differences in the frequency of adverse events were due to significantly higher frequency of myocardial infarction and repeated revascularization. The frequency of death was comparable between the groups.

Conclusions: in patients with Syntax >33 the probability of adverse cardiovascular events after stenting is significantly higher than in patients with Syntax ≤ 32 and lower when using stents with antiproliferative drug coating. In patients with Syntax score 0–22 and 23–32 and the frequency of adverse cardiovascular events is comparable. At the same time, the severity of coronary lesions does not significantly affect the death rate in long term follow up after stenting of the unprotected LMCA.

Keywords: LMCA stenting, coronary heart disease, Syntax Score.

Objectification of the characteristics of the distal bed of shunting vessels with diffuse atherosclerotic lesions in coronary surgery

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Abstract

Objective. Hospital results of coronary artery bypass grafting (CABG) in patients with diffuse coronary artery disease and effectiveness of coronary diffuse lesion index (DLI) assessments are the aims of this article.

Materials and methods. Patients who underwent CABG in 2014 were included in the study. 89 patients with diffuse coronary artery disease formed group 1. A group 2 included 91 patients with proximal lesions. Each distal anastomosis was formed under the surgical microscope. Preoperative clinical status and angiographic picture were analyzed. DLI measurement was based on three parameters: atherosclerosis severity, diameter of coronary artery and weight of myocardium supplying. Hospital results and bypass angiography in patients with recurrence angina were assessed.

Results. Preoperative clinical status was comparable in both groups. There were no any differences in SYNTAX Score (36 vs 32 in group 1 and 2 respectively, $p > 0.05$), however DLI in group 1 was higher than in group 2 (4.9 vs 1.8, $p < 0.05$). Hospital results was the same in study groups. There was tend to graft failure during 1 year after CABG with DLI more 4.

Conclusion. Surgical microscope using allows to perform CABG in patients with diffuse coronary artery disease without any additional risks. It is possible that proposed approach of DLI assessment will help predict graft patency in CABG patient, but it needs of follow-up study.

Keywords: diffuse lesions, coronary bypass surgery, the index of the diffuse lesions.

Statin therapy in asymptomatic patients with carotid atherosclerosis and low or moderate calculated risk: results of a retrospective analysis

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Abstract

Aim. The aim of the study was to assess the advisability of lipid-lowering therapy for primary cardiovascular prevention in asymptomatic patients, depending on the presence of subclinical carotid atherosclerosis.

Materials and methods. We examined 715 patients (302 men), mean age 54.6 ± 8.1 years old, with at least 1 traditional cardiovascular risk factor without manifested cardiovascular disease. Ultrasound examination of the carotid arteries was performed in all patients. Patients were divided into two groups: with statin therapy – statin+ (n= 184), without statin therapy – statin- (n= 531). Median of follow-up time was 4 years, (minimum 2 years, maximum 6). The endpoints included: a verified diagnosis of acute coronary syndrome, chronic coronary artery disease, planned coronary revascularization, ischemic stroke, and/or transient ischemic attack, cardiac death.

Results. Nonstenotic atherosclerotic plaque (AP) of carotid arteries was detected in 325 patients (45%). 127 non-fatal events (17.8%) occurred during the follow-up. Patients who received statins had a significantly higher level of total cholesterol, higher prevalence of diabetes and AP and two times higher calculated SCORE risk. However, there were no significant differences between the statin+ and statin- groups in the number of events both initially (OR 0.91, 95% CI 0.56–1.45) and after the propensity score matching (OR 1.02, 95 % CI 0.75–1.98). This indicates the ineffectiveness of statin use in patients with a low risk without consideration of vascular imaging data. The incidence of endpoints without statins was significantly higher in patients with AP compared to patients without AP. There were no significant differences in patients with statin therapy. In patients with carotid AP who has low and high SCORE risk and did not receive statins a significant increase in the number of events was shown compared with patients of the same risk groups without AP, and there was absence of such difference in case of statin use.

Conclusion. Moderate statin therapy reduces the risk of non-fatal cardiovascular events in patients with low calculated risk and carotid AP.

Keywords: carotid atherosclerotic plaque, cardiovascular risk, statins.

In the memory of M. Ya. Ruda