

PREVENTION OF MYOCARDIAL INFARCTION IN THE EARLY POSTOPERATIVE PERIOD IN PATIENTS AFTER PHLEBECTOMY WITH HIGH AND VERY HIGH CARDIOVASCULAR RISK

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Acute myocardial infarction (MI) is one of the most dangerous of postoperative complications. According to the study POISE (2008) 5% of patients after non-cardiac surgery emerged postoperative MI. 74.1% of all cases of MI occurred within 48 hours after the intervention; 65.3% of patients with postoperative myocardial infarction have not experienced symptoms of cardiac ischemia. Postoperative patients with ischemic heart disease and high blood pressure are the risk group of postoperative myocardial infarction, because every operation is accompanied sympathoadrenal stimulation and increased thrombogenic potential. Traditional phlebectomy with varicose veins is used very widely. Reliability and radicality of the operation, in most cases confirmed by the cumulative international experience. Feature of classical phlebectomy has a high traumatic intervention. This is accompanied by the activation of the coagulation system and an increased risk of thrombogenic complications. In addition, a high intensity of pain in these patients requires the appointment of narcotic analgesics, which may mask clinical picture of MI.

Objective: To develop and evaluate therapeutic interventions for the prevention of acute myocardial infarction in the early postoperative period in patients with high cardiovascular risk who have had phlebectomy.

Materials and methods. 35 patients (20 women and 15 men) with ischemic heart disease and / or arterial hypertension with high and very high cardiovascular risk who have had phlebectomy for varicose veins of the lower extremities were examined. The age of patients was 55 ± 4.7 years. Hypercholesterolemia (more 5.18 mmol / l) was diagnosed in all patients. The study excluded patients who with previous myocardial infarction.

Results and discussion. In the majority of cases of acute myocardial infarction are registered in the first week after surgery. The impossibility of using the troponin test necessitates performing an electrocardiogram. ECG was performed at 1, 3 and 6 days after phlebectomy. Consulting

of a therapist or a cardiologist was also used. All patients received statins, simvastatin and atorvastatin mostly, which were prescribed at a prehospital stage. Also all patients received beta-blockers, mainly bisoprolol. Therapy with beta-blockers was initiated at a prehospital stage for 1 month or more before surgery. The majority of patients were used beta-blockers during many years. During the pre- and postoperative period, the dose of beta-blockers did not change. Mechanisms of prevention cardioprotective effects β -blockers include monitoring of cardiac frequency, followed by an extension of time of diastolic filling of the coronary arteries; antiarrhythmic properties, reducing the risk of tachycardia. In addition, β -blockers reduce systolic blood pressure and the ventricular contraction force. At 24 hours after surgery, patients received low molecular weight heparin (0.3 ml fraxiparin or Clexane 0.2 ml (20 mg) one time per day for a week. Another drug that prevents the occurrence of acute coronary events in this patients was diosmin. The drug was administered at 500 mg 2 times per day from the first day of the postoperative period. Diosmin improves microcirculation. Increasing venous tone and elasticity of veins in the patients which received diosmin reduces postoperative hemorrhages and therefore thrombogenic complications. All of the above reduces the intensity and duration of pain period and reduces the duration of the assignment of narcotic drugs and reduce nociceptive stimulation sympathoadrenal cardiovascular system.

Conclusion. The use in the early postoperative period after phlebectomy low molecular weight heparins and diosmin during treatment with beta-blockers and statins can prevent the occurrence of acute myocardial infarction in patients with high or very high cardiovascular risk. The proposed measures will also reduce extremely high mortality in the patients because mortality from postoperative myocardial infarction is always much higher than the mortality rate in patients with ordinary myocardial infarction.

BIOCHEMICAL MARKERS OF CARDIOVASCULAR RISK IN PATIENTS WITH ASTHMA AND OBESITY

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Nowadays a significant prevalence of comorbid pathologies creates difficulties in their diagnostic. The combination of illnesses often combines the most common diseases of internal organs, but it is believed that often this coincidence is hereditary and genetically caused.

Among these diseases, the prevalence of which reaches a significant level since childhood, and the combination with other nosological forms in this case always occurs is a bronchial asthma (BA). According to WHO, asthma is

registered in 5-10% of the population, that is the number of patients exceeds 300 million. According to the Institute of Pulmonology in Russian prevalence of asthma has reached 561.3 per 100 thousand population, and an increased incidence over the past 10 years has grown by more than 3 times

By the criteria of prevalence, severity, complexity of diagnosis, treatment and rehabilitation, social and economic problems asthma takes leading place among the «diseases

of the century» and not without reason called «paradox of the twentieth century». Peculiarity of asthma at the present is an increasing of the proportion of severe forms, including among young people, with what is associated a high disability and mortality. It is primarily explained by the presence of comorbidities, which include so-called «socially significant diseases» including hypertension, coronary heart disease, diabetes mellitus and obesity.

According to WHO in the world today there are more than 1.5 billion people with overweight, and a third of them has an obesity. The combination of obesity and asthma has a negative influence on the quality of life of the patient, which is associated not only with mechanical barriers of excess fat, but also with the metabolic changes that occur in the body due to excess income of hormones and cytokines, which produces by fatty tissue. These changes can provoke formation of complications, namely, a combination of cardiovascular events asthma and obesity.

Objective: the aim was to establish the state of blood lipid spectrum in patients with asthma that occurs in conjunction with obesity, and defining the role of the obtained changes in the pathogenesis of diseases.

Materials and methods. We analyzed the level of lipids in 32 patients with asthma with obesity (study group), 19 people with asthma and normal weight and 21 patients with obesity (comparison groups). The average age of patients of the group was 42.3 ± 4.6 years, comparing groups – 41.7 ± 5.2 and 44.1 ± 3.4 years respectively. In all groups dominated by women - 59.4%, 57.9% and 57.1% respectively. Duration history of asthma ranged from 3 to 17 years and patients were divided as follows: a history of 5 years experienced a 21.3% and 21.1%, respectively, from 6 to 10 years - 55.3% and 52.6% and 21.3% and 26.6% respectively persons.

Given the body mass index (BMI) 23 patients (71.9%) of study group had an obesity stage I and 9 persons (28.1%) – stage II. In comparison group distribution was 76.2% and 23.8% respectively.

Assessment of lipid profile was performed on total cholesterol (TC), serum triglyceride (TG), low density lipoprotein (LDL) and high density (HDL).

Results and discussion. Studying the content of lipid spectrum of blood showed that the presence of obesity observed increases in total cholesterol levels. So mild form of hypercholesterolemia (HCH) with fluctuation cholesterol content between 5.2 and 6.5 mmol/l was recorded in 12

patients (37.5%); moderate HCH - from 6.5 to 7.8 mmol/l - 15 (46.9%) and severe hypercholesterolemia (cholesterol above 7.8 mmol/l) - in 5 patients (15.6%).

In asthma patients with normal weight generally observed normolipidemia (12 patients - 63.2%) or easy degree of hypercholesterolemia (7 patients - 36.8%). Isolated form of obesity was also accompanied by oscillations of the blood cholesterol; that changes led to the following indicators: mild hypercholesterolemia - in 33.3% of cases, moderate - in 47.6% and severe - in 19.1% of patients. That is, as the main group and so the comparison group with isolated obesity should almost equal distribution of patients according to the forms of hypercholesterolemia.

Moreover, were reliable increased indicators of TG and LDL levels while reducing the amount of HDL cholesterol in the blood serum. These changes showed an increased risk of atherosclerosis and development of steatohepatitis.

In patients with asthma was analyzed the frequency of different types of dyslipoproteinemia, which used the criteria set out in the recommendations of the Joint Working Group of Experts of the European Society 1998. So normolipidemia was detected in 57.9% (11) non-obese individual with asthma and 21.9% (7) patients with asthma and obesity. Isolated hypercholesterolemia (IIa type of dyslipoproteinemia by Fredrickson's classification) was characterized by 28.1% (9) patients with asthma and obesity, and 31.6% (6) asthma patients with normal weight. The combined hyperlipidemia (IIb type) met in 43.8% (14) patients of the study group and in 10.5% (2) patients in the control group. Isolated hypertriglyceridemia (IV type) was found only in patients with obesity - 6.3% of cases.

Thus, the presence of abdominal obesity in patients with asthma more often ($p < 0.05$) was associated with combined hyperlipidemia, which has a number of atherogenic characteristics. In particular, the high concentration of cholesterol, LDL and triglycerides with low HDL content that can be considered as a precondition for the development of atherosclerosis, clinical marker of which is cardiovascular events - pain in the heart, heartbeat, conduction and rhythm disorders.

Conclusions. Asthma on the background of obesity accompanied by negative changes in lipid blood spectrum with the formation of the most atherogenic dyslipidemia's types by Fredrickson. This fact may contribute to the development of atherosclerosis and formation of complications.

MECHANISMS OF TARGET ORGAN DAMAGE IN PATIENTS WITH ARTERIAL HYPERTENSION AND OBESITY

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Diseases of the cardiovascular system in most countries define the structure of morbidity and mortality, which makes it possible to consider them as medico-social problems. This thesis is confirmed by the results of official statistics. For example, in Europe and the US, the number of patients exceeded the barrier in 40%; in Russia the diagnosis of arterial hypertension (AH) was recorded in 40.4% of women and 37.3% - men. In Ukraine, patients with increased numbers of blood pressure make up 46.8% of the adult population.

AH is considered as the leading factor of cardiovascular risk. According to the index DALY (2009) it enters and heads of eight major risk factors, which are recorded in 50% of cases among noninfectious diseases.

Another problem of modern clinic is obesity. According to the WHO there are more than 1.5 billion people with overweight, 700 million among them suffering from obesity. In this case we can speak of a logical increase in the number of patients with comorbidity of obesity and hypertension.