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Clinical Features of the Course of Unstable Angina after Aorta-Coronary Bypass Shutting in Patients in Polymorbidity with Arterial Hypertension and Obesity

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ABSTRACT

In this paper, we studied the clinical and structural and functional states of patients with coronary artery disease with concomitant arterial hypertension (AH) and obesity after coronary artery bypass grafting (CABG). This study was conducted on the basis of the Samarkand regional branch of the Republican Specialized Scientific and Practical Medical Center for Cardiology (SRF RSNPMCC). We examined 80 patients with coronary artery disease with hypertension after CABG, with clinical signs of unstable angina. Among the examined persons, there were 52 (65%) males, 28 (35%) females . The age of the patients was determined in the range from 44 to 78 years. All patients underwent clinical and instrumental examinations, including ECG, echocardiography (ECHOCG), endovascular examination methods : coronary artery bypass grafting (CABG) and biochemical blood tests. With an increase in the degree of concomitant hypertension and impaired lipid metabolism in patients 1 year after the primary CABG surgery, the proportion of patients with severe CHF will increase, there was an increase in the percentage of patients with stable angina pectoris III-IV FC and unstable angina pectoris, as more severe forms of the disease, which was approved by ECG, ECHOCG.

Relevance

In modern society, coronary heart disease (CHD) significantly affects the demographic situation, therefore, in developed countries, the treatment of such patients is a priority in medicine [1, 3, 5, 7]. For Russia, the solution to this problem is of particular socio-economic significance, due to the high mortality rates of patients with coronary pathology and the incomplete availability of many types of treatment for this disease for the majority of the country's population [2, 4, 6, 8].

Surgical methods occupy an important place in the treatment of patients with coronary artery disease. They can significantly improve the quality of life of patients and significantly increase

its duration. However, any surgical intervention carries a risk. In this regard, the most severe category of patients presenting an increased risk are age-related patients. Over the past few years, due to the rapid development of interventional cardiology, the structure of patients admitted for coronary artery bypass grafting (CABG) has changed significantly [6, 19].

Every year there is an increase in the age of patients undergoing surgical treatment of coronary artery disease, which, in turn, leads to an increase in high-risk patients. This fact negatively affects both the number of postoperative complications and surgical mortality [9, 11, 13, 15]. Patients with diffuse atherosclerotic lesions of the coronary bed, whose proportion increases annually and amounts to 40-50% among all patients with coronary heart disease (CHD), represent a difficult cohort of patients, both for cardiac surgery and endovascular interventions, due to the high frequency cardiovascular complications that occur in the long-term period after surgery [4, 7, 12].

At the same time, it is known that the two-year survival rate of such patients against the background of conservative treatment, subject to high patient compliance , is approximately 50% []. Coronary artery bypass grafting (CABG) is currently the most common method of myocardial revascularization in patients with diffuse and multivessel coronary disease [14, 16, 18]. In addition, CABG operations from a mini-access, as well as hybrid technologies, when CABG is performed in combination with percutaneous coronary interventions (PCI) , are being actively introduced into practice . From this it follows that the study of unresolved issues of various options for myocardial revascularization in patients with coronary artery disease is of great relevance in cardiovascular surgery [20].

Target. To study the clinical and structural and functional state of patients with coronary artery disease with concomitant arterial hypertension (AH) and obesity after coronary artery bypass grafting (CABG).

Materials and methods. We examined 80 patients with coronary artery disease with hypertension after CABG, with clinical signs of angina pectoris. Among the examined persons, there were 52 (65%) males, 28 (35%) females . The age of the patients was determined in the range from 44 to 78 years. All previously operated patients were divided into groups depending on the degree of hypertension and the level of total cholesterol: the first group - patients admitted with recurrent angina pectoris after CABG, suffering from grade II hypertension without obesity. The second group of patients admitted with angina pectoris after CABG, suffering from II degree hypertension with II degree obesity. The third group - patients admitted with recurrent angina pectoris after CABG, suffering from grade I II hypertension without obesity. The fourth group - patients admitted with a recurrence of angina pectoris after CABG, suffering from grade III hypertension with obesity. The control group included patients after CABG, not suffering from hypertension, without obesity. Inclusion Criteria. All patients underwent clinical and instrumental examinations, including ECG, echocardiography (ECHOCG), endovascular examination methods : coronary artery bypass grafting (CABG) and biochemical blood tests.

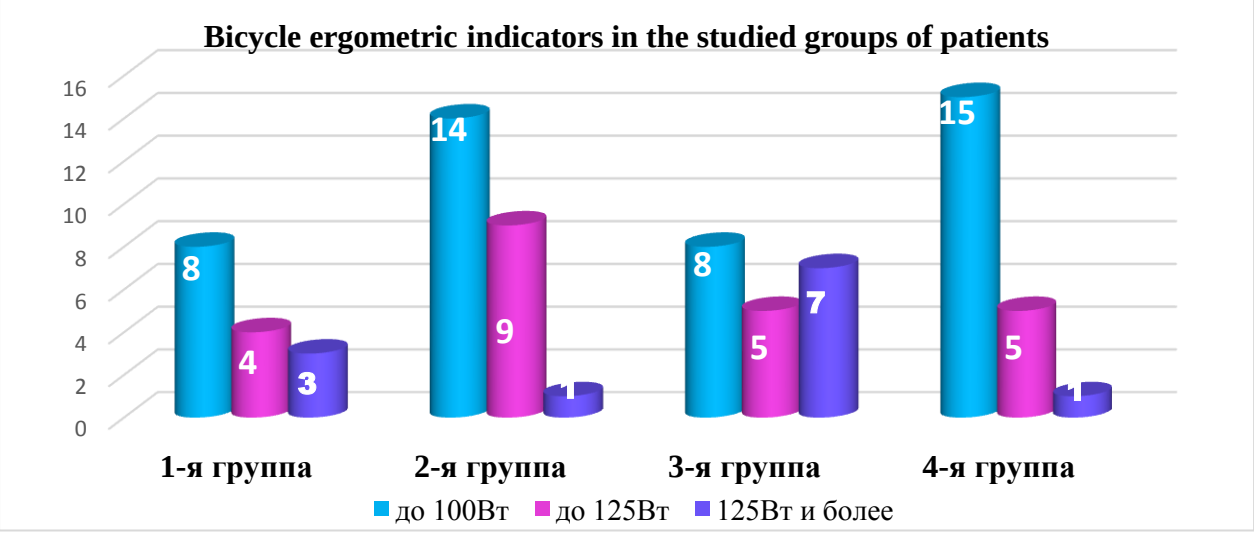
Research results. After CABG, all patients experienced a return of clinical signs of angina pectoris in most cases with an increase in its functional class (FC). The first group is dominated by patients with stable angina FC 2 (5 patients). In the second group, 3-4 FCs of stable angina predominate (patient 14). In the third group, 3 FCs of stable angina predominate (12 patients), but the number of patients with the clinical picture of unstable angina increases (18 patients). In the fourth group, 17 patients have clinical signs of severe stable angina 3-4 FC and 14 patients with unstable angina. The recurrence of angina pectoris in operated patients was accompanied by a deterioration in the structural and functional parameters of the left ventricle (LV), more pronounced in patients of groups 3 and 4. When evaluating the results of echocardiography, the studied parameters did not significantly differ from the results obtained in the control group.

Only the values of the left ventricular ejection fraction (LVEF) in the study and control groups were significantly different. In the control group, LVEF was 61.1±1.3%.

LVEF in patients included in the first group was 57.8±2.4% and ranged from 47 to 60%. (Fig. 1). Patients included in the second group had LVEF 54.4±2.2%, individual values of this indicator ranged from 48 to 60%. In the third group of patients, LVEF ranged from 44 to 55% and averaged 50.8 ± 3.1%. The average value of LVEF in patients of the fourth group corresponded to 48.1±2.8%, and individual LVEF values in this group of patients ranged from 42 to 52%. The total ejection fraction of two patients of the fourth group was 36% and 43%, in the rest - above 44%.

Fig.1. LVEF parameters in the studied groups of patients

According to the data of bicycle ergometry performed for all patients, it was found that in the first group, 8 patients (53.3%) had a tolerance to exercise of not more than 100 W: 4 patients (26.6%) had a tolerance of more than 125 W. three (20%) patients had a tolerance of more than 125 W. In the second group, tolerance to a load of not more than 100 W was in 14 patients (58.3%); 9 patients (37.5%) had a tolerance to a load of 125 W; 1 patient (4.1%) had a load tolerance of more than 125 watts. In the third group - 8 (40%) patients had a load tolerance of not more than 100 W; with an increase in load up to 125 W, tolerance was in 5 patients (25%), tolerance to a load of more than 125 W was in 7 patients (35%). In the fourth group, in 15 (71.4%) patients, tolerance to the load was no more than 110 W, with a load of 125 W, only 5 (23.8%) patients were tolerant to this increase, with a load of more than 125 W, tolerance was only in 1 (4 .7%) of a person (Fig. 2).



Rice. 2. Bicycle ergometric indicators in the studied groups of patients

Consequently, LV dysfunction is a factor that negatively affects the course of the late postoperative period, causing the progression of atherosclerosis of the coronary arteries, the development of a diffuse form of damage in them. This hypothesis was confirmed in the conducted research.

Conclusion. Thus, with an increase in the degree of concomitant hypertension and impaired lipid metabolism in patients 1 year after the primary CABG surgery, the proportion of patients with severe CHF will increase, there was an increase in the percentage of patients with stable angina pectoris III-IV FC and unstable angina pectoris, as more severe forms of the disease. , which was confirmed by ECG, ECHOCG data. The cause of angina recurrence in patients with coronary artery disease who underwent CABG was a violation of the patency of shunts, the progression of atherosclerotic changes in the coronary artery.

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