

HEMODYNAMIC FEATURES IN POST-CABG PATIENTS WITH METABOLIC SYNDROME AND PRIOR MYOCARDIAL INFARCTION**Majidov Sharifjon Xusenovich**

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Abstract. Coronary artery disease (CAD) remains a leading cause of morbidity and mortality globally. Metabolic syndrome (MS), comprising obesity, dyslipidemia, hypertension, and insulin resistance, exacerbates the course of CAD and negatively influences outcomes following coronary artery bypass grafting (CABG). This study examines intracardiac hemodynamic changes in CAD patients with MS who underwent CABG surgery. We compared preoperative, early postoperative (1 week), and late postoperative (3 months) hemodynamic parameters and quality of life using echocardiography and SF-36 scoring.

Keywords: Coronary artery disease, metabolic syndrome, CABG, hemodynamics, myocardial infarction, quality of life.

Introduction:

The prevalence of MS has significantly increased in recent years, with nearly 7% of the global population affected. MS accelerates atherogenesis and worsens the prognosis of ischemic heart disease (IHD). While CABG is a well-established treatment for severe CAD, its effectiveness in patients with MS requires deeper analysis due to potential postoperative complications.

Objective:

To assess changes in intracardiac hemodynamics and quality of life in CAD patients with MS undergoing CABG.

Materials and Methods:

A total of 60 patients diagnosed with CAD and scheduled for CABG were divided into two groups: 30 with MS and 30 without. Clinical, biochemical, and instrumental data were collected before surgery, and at 1 week and 3 months postoperatively. Diagnostic methods included echocardiography (ECHO), SF-36 quality-of-life survey, and risk stratification using the FINDRISK scale.

Results:

Postoperative improvement in intracardiac hemodynamic parameters was observed in both groups, but recovery was slower and less pronounced in the MS group. MS patients demonstrated higher preoperative abdominal obesity and insulin resistance markers. One year after CABG, the MS group showed increased incidence of restenosis, persistent angina symptoms, and reduced myocardial perfusion based on scintigraphy findings.

Discussion:

Metabolic syndrome contributes to a worse postoperative course due to systemic inflammation, endothelial dysfunction, and hypercoagulability. These factors reduce the effectiveness of myocardial revascularization and heighten the risk of complications such as restenosis or heart failure. Addressing MS components preoperatively is crucial to improving long-term CABG outcomes.

Conclusion:

CABG significantly improves hemodynamic status in CAD patients; however, those with MS show slower recovery and more postoperative complications. Individualized management of MS before and after surgery is essential for optimizing treatment success.

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