

Streszczenie w języku angielskim / Summary

Introduction

Significant progress observed in cardiac surgery over the past several years allowed qualified patients with higher operational risk for surgery. Operations have become possible for increasingly elderly patients burdened with numerous comorbidities. Outpatient care of a patient after cardiac surgery is an integral part of treatment, affecting the long-term prognosis. Monitoring laboratory parameters, pharmacotherapy, and clinical and echocardiographic assessment, involving close cooperation between a cardiac surgeon and a cardiologist is the basis for proper patient care and certainly contributes to optimising patient treatment after cardiac surgery. The introduction of comprehensive care after cardiac surgery leads to longer survival, reduces the frequency of rehospitalization and sickness absence from work, and, finally, reduces the financial burden on the state. In Poland, despite a well-functioning program of comprehensive care for patients after myocardial infarction and planned implementation of comprehensive care for patients with heart failure, still, there is a lack of systemic solutions for outpatient care for patients after cardiac surgery.

The aims of the work were:

- the analysis of selected clinical and laboratory parameters of patients after cardiac surgery in outpatient care;
- creating a guide for cardiac surgery patients.

Materials and methods

A population of 171 patients hospitalized in 2018-2019 at the Department of Cardiac Surgery at the Medical University of Białystok diagnosed with coronary artery disease and/or valvular heart disease for elective surgical procedures were prospectively enrolled on the study. Clinical data and selected biochemical and echocardiographic parameters were analyzed. The patient's quality of life after cardiac surgery was assessed using scales (modified Borg scale, KCCQ and SF-36). Patients were followed up after 3, 6 and 12 months.

The study was conducted following the Declaration of Helsinki, and the protocol was approved by the Bioethics Committee of the Medical University of Białystok (No: R-I-002/335/2018).

Results

The group of patients who qualified for coronary artery bypass surgery (CABG) consisted of 111 patients (64.9%), and patients qualified for isolated valvular surgery of 25 patients (14.6%), while the patients undergoing complex surgery accounted for 35 patients (20.5%). Patients who qualified for valvular and CABG surgery were initially the most burdened group (the EuroSCORE II score was significantly higher). In this group, patients also had higher baseline parameters of myocardial damage assessed as increased B-type natriuretic peptide concentration and creatine kinase activity. Throughout the follow-up period, the combined cardiac surgery group had features suggestive of persistent heart failure (assessed as BNP and Modified Borg Score together with Kansas City Cardiomyopathy Questionnaire), as well as persistent myocardial damage (3- and 6-months) and deficiencies in iron management (3 months), $p < 0.05$. After 12 months of observation, a tendency to normalization of the parameters mentioned above was observed ($p < 0.05$). In the entire study population, the symptoms of heart failure were statistically significantly reduced, and the self-assessment of the clinical condition improved within a year of surgery. A similar relationship was observed in the subpopulations after CABG and valve surgery, while after valvular surgery with CABG, the worsening of heart failure

symptoms was observed after six months ($p < 0.05$). This relationship was not observed when analyzing the results of the SF-36 questionnaire assessing the quality of life.

Conclusions

The group of patients undergoing complex cardiac surgeries (coronary artery bypass grafting and valvular surgery) is at particular risk of persistent symptoms of heart failure resulting from extensive perioperative myocardial damage and therefore requires special attention and long-term outpatient care. It is necessary to introduce comprehensive care for the patient after cardiac surgery, emphasising the population after complex coronary artery bypass surgery and valvular disease. Including educational teams in such a procedure and teaching the patient self-control of symptoms could improve postoperative care and the quality of life.