

Angioplasty balloon occlusion of LIMA graft in reoperations of patients with prosthetic valve endocarditis and patent LIMA-LAD graft

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Abstract

Background: Myocardial protection in reoperations in cardiac surgery is extremely difficult in patients with previous coronary surgery and a working LIMA-LAD graft, and it largely determines the outcome of surgery and long-term prognosis. We use a the method of percutaneous angiographic balloon LIMA occlusion and cardioplegic arrest. *Aims:* The aim of this study was to compare the data of patients with angiographic balloon LIMA-occlusion and those without occlusion in operations related to PVE, and previous coronary surgery with permeable LIMA graft, determining the degree of safety and benefits of method. *Study design and Methods:* A total of 20 patients undergoing surgery for prosthesis valve endocarditis with patent LIMA-LAD graft were analyzed retrospectively. We divide the patients into 2 groups. Group A patients - with LIMA occlusion and Group B patients - without LIMA occlusion). The pre-, intra- and postoperative results were compared and the degree of safety and benefits of the application of the method were studied. *Results:* 80% of patients in group A needed only dopamine infusion and 20% needed the addition of a second catecholamine (Adrenaline) at the end of CPB. In group B, the need for double catecholamine maintenance is in 50% of patients. The need for implantation of an intra-aortic balloon pump due to refractory heart failure was registered in 10% of patients in group A and in 20% of patients in group B. It was found that the average duration of mechanical ventilation in group A is 10.5 hours postoperatively, and in group B - 12.5 hours. The mean duration of catecholamine infusion in both groups was 3 days. The average stay in intensive care is shorter for patients in Group A - 2.5 days, and in Group B is 3.5 days. In terms of survival - mortality in the group with LIMA occlusion is 0%, while in the group without LIMA occlusion is 20%. *Conclusion:* Our reported results from the use of the LIMA balloon occlusion method in patients with prosthetic valve endocarditis who are high-risk and complicated patients and nevertheless the mortality in this group studied by us is 0% and no serious complications of the applied method have been registered. Therefore, we believe that the angiographic balloon LIMA occlusion is a reliable, easily applicable and relatively safe technique that improves the surgical results and prognosis of patients in need of reoperative cardiac surgery.

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