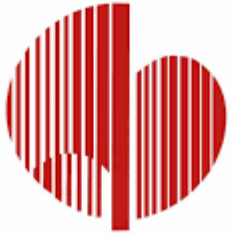


Federal State Budgetary Institution "National Medical Research Center of Cardiology named after Academician E.I. Chazov" of the Ministry of Health of the Russian Federation

Patency of coronary bypass grafts in patients with diffuse lesions. Hospital results.

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Introduction.

Patency of coronary bypass is a determining factor in the prognosis after direct revascularization. Early bypass dysfunction after coronary artery bypass grafting (CABG) reaches 4–20%. Diffuse coronary artery disease is one of the main risk factors for early graft occlusion and worse treatment outcomes. The use of microsurgical techniques improves clinical outcomes in group of these patients. The actual incidence of graft occlusion for various reasons remains unknown despite a large number of studies

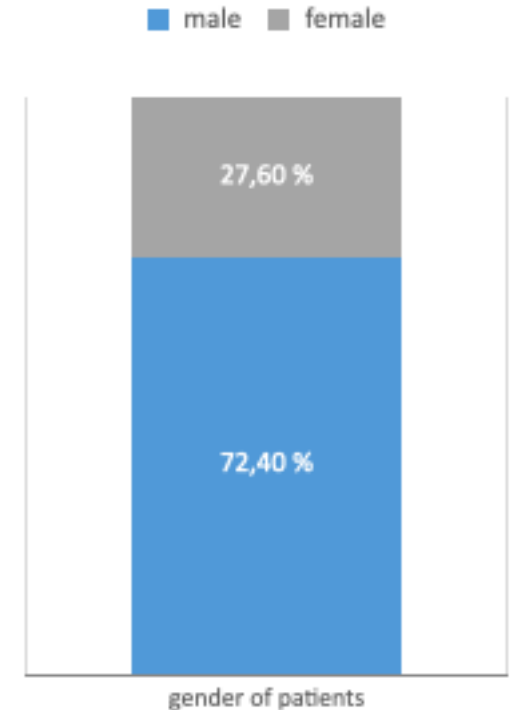
Objective.

The aim of the study is to evaluate the frequency of early graft occlusion in patients with diffuse coronary artery disease.



Materials and methods

- The prospective study included 29 patients with multiple diffuse lesions of the coronary arteries, who were operated in 2021.
- All patients had coronary bypass surgery with microsurgical techniques. Various methods of coronary reconstructions were used (onlay patch coronary grafting, coronary endarterectomy, etc.).
- The criteria for a diffuse lesion were atherosclerosis of the coronary arteries with a distal diameter less than 2 mm, for >70% of vessel involving the distal coronary arteries less than 1.5 mm in the anastomotic zone.
- All patients were on dual antiplatelet therapy and underwent CT scan bypass angiography 7 days after surgery
- The patency of coronary bypasses was analyzed depending on the severity of the lesion and the type of coronary reconstruction according to CT scan data.



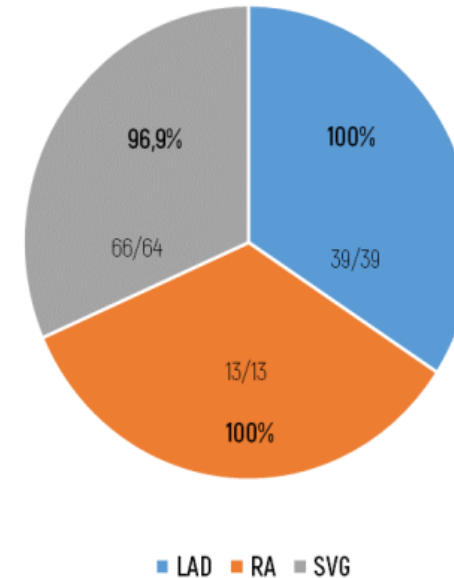
mean age was 63.8±6.9 years



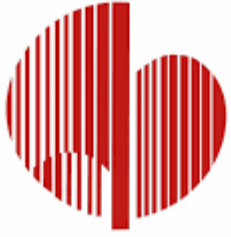
Results

- The total number of distal anastomoses was 118; and 81 of them (68.6%) had diffuse lesion.
- The number of coronary anastomoses to arteries less than 1.5 mm was 43% (n=51), 6 endarterectomies and 23 onlay-patch anastomoses were performed.
- The number of autovenous coronary bypasses were 66, autoarterial - 52 (with the internal thoracic artery - 39, radial artery - 13 coronary bypasses).
- No cardiovascular events were registered at the hospital stage.

Results CT scan bypass angiography



Routine CT scan revealed 2 (1.6%) occlusions of autovenous grafts to arteries less than 1 mm in diameter, no cases of occlusion of autoarterial grafts were registered.



Conclusion

Performing complex coronary reconstructions using the microsurgical technique in diffuse lesions of the coronary arteries is accompanied by a low frequency of occlusion of both autovenous and autoarterial bypass grafts, which makes it possible to achieve effective revascularization.

