

## Evaluation of bypass grafts after minimally invasive coronary artery bypass grafting according to the results of MSCT- angiography

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**Background:** Minithoracotomy avoids the complications specific to sternotomy access, which in turn creates the conditions for early activation and rehabilitation of patients, especially elderly, with diabetes mellitus, obesity, disorders of the musculo-skeletal system.

**Purpose:** To assess the patency of grafts after minimally invasive coronary artery bypass grafting (MICS CABG).

**Methods:** We analyzed the results of 50 MSCT- angiography made to patients with MICS CABG operated between 2014 and 2016 (28,5±13,5 months after surgery). Totally 132 conduits were used, 47 (35.6%) of them – arterial, 85 (64.4%) – venous. In all cases left internal mammary artery (LIMA) was used for revascularization of the left anterior descending artery (LAD). The great saphenous vein was used as a conduit for revascularization of: diagonal branch (DA) – 10 (11.7%) cases, left circumflex artery (LCx) – 44 (51.8%), right coronary artery (RCA) – 12 (14.1%), posterior interventricular branch – 19 (22.4%). Assessment of the patency of grafts were performed: 1–2 years (33 conduits: 13 arterial, 20 venous), after 2–3 years (51 conduits: 19 arterial, 32 venous) and after 3–4 years (48 conduits: 15 arterial, 33 venous).

**Results:** Assessment of coronary grafts patency in the first period revealed occlusion of 3 (15%) venous conduits. In 2 cases, the venous conduit was anastomosed with the LCx, in 1 case with the RCA. The cumulative patency of the grafts was as follows: arterial – 100%, venous – 85%. In the second point of the study occlusion and stenotic changes of LIMA has not been revealed. Determined occlusion 5 (15,6%) venous grafts. In all cases, the occluded venous conduits revascularized the RCA. Total permeability of conduits: arterial – 100%, venous-84.4%. In the third time interval it was revealed: in 1 case of LIMA occlusion and 7 venous grafts, in 4 cases in the area of the LCx, in 2 – DA and in 1 case – in the area of the RCA. Total patency of grafts: arterial – 93.3%, venous – 78.8%. Total permeability of conduits: arterial – 97.9%, venous – 82.4%.

**Conclusion:** The analysis shows good long-term results of the functioning of grafts after MICS CABG and their comparability with the results of patency of the conduits after CABG performed by the traditional