

Reconstructing diffusely-diseased LAD using Long-opening LAD-Endarterectomy followed by direct LIMA anastomosis versus indirect LIMA grafting to an on-lay Saphenous vein patch: Comparative prospective study.

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Abstract

Background: Surgical revascularization of CAD patients having diffusely-diseased LAD is a difficult surgical problem. Following long LAD-endarterectomy (LAD-CE), some surgical centers prefer long direct LIMA-to-LAD grafting; others perform LIMA grafts to on-lay SVG patch. Favoring either technique depends on multiple factors and is still questionable. This study was performed to compare the experience and early results of using direct LIMA-to-LAD anastomosis with endarterectomy to indirect anastomosis by LIMA-to on-lay SVGs during standard CABG.

Methods: Thirty patients who had IHD with diffusely-diseased LAD coronary vessel were included in a prospective comparative study starting from March 2011 till March 2014, in Kasr al Aini's University Hospitals. All patients had diffusely-diseased LAD for which they were subjected to long opening LAD-CE. Patients were divided into two groups: Group I (15 patients) underwent direct long segment LIMA-to-LAD implantation with CE; while in group II (15 patients) underwent LIMA grafting on an on-lay SVG. Follow-up was done over the first year postoperatively: major cardiac adverse events, death, MI, hospital readmission, reoperation and/or revascularization were followed since discharge and over one year later.

Results: Two patients died in each group (total mortality 13%). In group I, one due to refractory LV failure; and one due to refractory ventricular arrhythmias. In group II, a patient died due to mediastinitis and a second patient died due to progressive liver failure. There were no MI, CHF, or CNS complications.

Conclusion: LIMA-to-LAD following long-opening LAD-CE could be safely-performed using both techniques. Both procedures were technically successful to revascularize diffusely-diseased LAD.

Abbreviations: *IHD: Ischemic Heart Disease LAD Left Anterior Descending. LIMA: Left Internal Mammary Artery CE: Coronary Endarterectomy MI: Myocardial infarction CHF: Congestive Heart Failure CNS: Central nervous system LAD-LCE: Left Anterior Descending Long Coronary Endarterectomy. SV: Saphenous vein CABG: Coronary Artery Bypass Grafting CPB: Cardiopulmonary Bypass PO: Postoperative. IABCP: Intraaortic balloon counterpulsation Statistical significance if result < 0.05*

Key words: coronary artery disease, coronary by-pass, endarterectomy, LIMA patch, onlay vein patch.