

LONG-TERM RESULTS OF A SIMPLIFIED TECHNIQUE TO IMPROVE REVASCULARIZATION OF DIFFUSELY DISEASED LAD.

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Objective Patients undergoing coronary surgery today more often have advanced coronary disease with diffuse extensive or multiple plaques. Complete revascularization is desirable both with regard to treatment of angina and long-term survival. Coronary endarterectomies are associated with a high incidence of perioperative myocardial infarction and postoperative complications. Furthermore, long-term results appear questionable. In contrast, Barra et al have reported reconstruction of long segments of the LAD with LITA employing plaque exclusion to provide a low incidence of myocardial infarction, excellent graft patency and good long-term results. However, this method appears technically demanding with cross clamp times averaging approximately two hours. Here we report long-term clinical experience with a simplified approach to improve revascularization of diffusely calcified LAD.

Method From 1995 to 2003 fifty-six patients were operated with extended LAD-LIMA anastomoses (XA-group) because of diffusely diseased vessel with the aim to maintain the integrity of the vessel intima and to achieve good run-off distally and proximally. Plaque exclusion was only employed occasionally if this could be done without substantially compromising the lumen. The patients were compared with a control group matched for age, time of surgery, number of distal anastomoses and surgeon comprising 110 patients undergoing conventional CABG. Overall follow up was 96% complete and averaged almost 6 years.

Results In the XA-group v control group mean age was 63 ± 10 v 64 ± 9 years and Euroscore was 3.8 ± 2.8 v 4.0 ± 2.9 . Cross clamp time averaged 66 ± 18 v 61 ± 24 minutes while 4.1 ± 1.0 v 3.9 ± 1.0 distal anastomoses and their corresponding central anastomoses were performed using single-clamp technique. Perioperative myocardial infarction was found in 5.5% v 4.6%. 30-day mortality was zero in both groups. Cumulative five-year survival was 96.4% v 91.8%. At follow up 70% v 62% of the patients never used short acting nitrates whereas 15% v 11% used them more than once weekly. In patients with recurrent angina none of the LIMA grafts examined by angiography had closed.

Conclusions Simplified long-segment reconstruction of diffusely diseased LAD with extended LIMA-LAD anastomoses without plaque exclusion produced results comparable with those found after CABG in routine patients.