

ALTERNATIVE APPROACHES IN OFF-PUMP REDO CORONARY ARTERY BYPASS GRAFTING

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Introduction: The recent development of off-pump and minimally invasive techniques in CABG has provided the surgeon with multiple options in performing redo revascularization procedures.

Methods: We retrospectively analyzed our early results in off-pump redo CABG procedures. Between Jan. 1998 and Jan. 2000, we performed 55 off-pump redo CABG procedures: 25 through a full sternotomy, 21 through a left posterolateral thoracotomy, 5 using a lower hemi-sternotomy and 4 using a mini anterior thoracotomy with endoscopic IMA harvesting. The mean age of this group was 67.7 years (range 37-85). The mean number of grafts performed in earlier operations was 2.7 (range 1-6) with 51% of grafts still partially or fully open at the time of re-operation. Twenty-six patients (47.3%) had a functioning LIMA graft to LAD. Preoperative clinical severity scoring predicted a mortality of 7% and morbidity of 30%.

Results: There were no operative or thirty-day infarctions or deaths. Morbidity included pulmonary complications (8), renal failure (1) and bleeding (1) for a total complication rate of 18.9%. The average number of grafts performed was 2.7 (range 1-5) for sternotomy patients and 1.4 (range 1-3) for thoracotomy patients.

Conclusions: By employing alternative approaches in performing off-pump redo CABG procedures, the surgeon can often avoid injury to pre-existing patent internal mammary grafts as well as the morbidity associated with the use of cardiopulmonary bypass.