

[2004] [2116] Concomitant coronary and carotid artery surgery: operative outcome and long-term results

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Objective: Perioperative stroke after coronary artery bypass grafting (CABG) is an issue of paramount importance, particularly as the age of patients referred for cardiac surgery increases and with it the risk of stroke. Evidence has demonstrated that part of this increased stroke risk is related to carotid artery stenosis, but controversy remains concerning the best approach for patients with concomitant severe carotid and coronary artery disease. Such managements vary from ignoring carotid lesions at the time of cardiac surgery, to performing staged operations with delay of one of the procedures, to combining coronary artery grafting and carotid endarterectomy during the same anesthesia. To analyse this controversial issue further, we have reviewed our early and long-term results in all patients who underwent concomitant carotid endarterectomy and CABG at our institution, between January 1988 and December 2002.

Methods: Records of 311 consecutive patients were reviewed, and follow-up obtained (98% complete). Of the group (mean age 67 years; 74% males), 193 (62%) had triple-vessel disease, 177 (57%) had unstable angina, 96 (31%) had left main coronary stenosis, 60 (19%) had congestive heart failure (CHF), and 108 patients (35%) had either an history of vascular procedures or existing vasculopathies. Preoperative assessment revealed asymptomatic bruits in 172 (55%), transient ischemic attacks in 49 (16%), strokes in 23 (7%), and bilateral carotid disease in 62 patients (20%). There were 23 (8%) urgent operations, and ascending aorta was described as atheromatous or calcified in 66 patients (21%).

Results: Hospital death occurred in 24 patients (7.7%), myocardial infarction in 11 (3.5%), and permanent stroke in 12 (4%). Significant multivariate predictors of hospital death were CHF, aortic cross-clamping and cardiopulmonary bypass (CPB) times, and atheromatous or calcified aorta. Significant predictors of postoperative stroke were calcified aorta, advanced age, and CPB time. Significant predictors of prolonged hospital stay were postoperative stroke, advanced age, and calcified aorta. Ten-year actuarial event-free rates were as follows: death, 64%; myocardial infarction, 78%, stroke, 88%, percutaneous angioplasty, 95%, redo coronary artery grafting, 92%; and all morbidity and mortality, 58%.

Conclusions: Concomitant carotid endarterectomy and coronary bypass grafting can be performed with acceptable operative mortality and morbidity, and good long-term freedom from coronary and neurologic events.

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