Coronary artery bypass grafting is associated with excellent long-term survival and quality of life: A prospective cohort study

Joel Dunning, Julian R L Waller, Barbara Smith, Sue Pitts, Simon W H Kendall, Khalid Khan

ABSTRACT: We investigated the long-term outcome of coronary artery bypass grafting both in terms of survival and quality of life. Ten-year postsurgery survival was collated on patients undergoing coronary artery bypass grafting from 1994 to 1996, and quality of life was assessed using EQ-5D and a quality-of-life thermometer. We analyzed data from 1,180 patients. Mean age was 61 years, and 79% had triple-vessel disease. Thirty-day mortality was 3.3% (1.8% elective). Mean time to censorship for survivors was 9.9 years (range, 8.1 to 12.3 years). Ten-year survival was 66% across all patients, 70% for elective patients. Ten-year cardiac survival was 82%. Percutaneous intervention was required in 25 patients in the subsequent 10 years (2%), and only 4 required redo coronary artery bypass grafting (0.3%); 59% of patients reported no angina, and 88% of patients had grade II angina or better. Of 621 patients who were assessed for quality of life at 10 years, 530 (85%) had a quality of life within a 95% confidence interval of the score found in the general population with similar age. Poor quality of life was reported in 91 patients (14.7%). Significant predictors of poor long-term quality of life were current smoking, Canadian Cardiovascular Society grade III or IV, redo operation, female sex, diabetes, peripheral vascular disease, more than 2 days in intensive care, and chronic obstructive pulmonary disease. Twenty-five percent of patients with poor EQ-5D outcome had grade IV angina. Interestingly, age did not correlate with poor outcome, and administration of blood, arterial revascularization, left mainstem disease, or cross-clamp fibrillation had no impact on survival or outcome. Coronary artery bypass grafting is associated with excellent 10-year survival and quality of life.