

CORONARY ARTERY BYPASS SURGERY IN EXTREMELY ELDERLY PATIENTS: PREDICTORS OF OPERATIVE MORTALITY AND DISCHARGE STATUS

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Background: The population of the United States is aging, and most patients who are at least 80 years old have identifiable coronary artery disease. We examined a national database to determine predictors of operative mortality (OM) and discharge status (DCS) in elderly patients who undergo coronary artery bypass grafting (CABG).

Methods: Using the 2004 Nationwide Inpatient Sample database, we identified 5737 patients aged ≥ 80 years who underwent primary isolated CABG. We collected data on the source of patient referral; DCS; preoperative variables, including the Deyo comorbidity index; and outcome measures. Multivariate logistic regression was used to identify independent predictors of OM and DCS.

Results: The patients' mean age was 82.8 ± 2.5 years, and in-hospital mortality was 7% (395 of 5737). The mean hospital length of stay was 12.4 ± 10.1 days, at a cost of $\$44,491 \pm 33,902$ per patient. Only 21% of patients (1203 of 5737) had a routine hospital discharge. Home health care was necessary for 27% (1577 of 5737), and transfer to a skilled nursing home, rehabilitation unit, or other special care facility was necessary for almost all of the remaining patients (45%; 2555 of 5737). Older age, female sex, higher comorbidity index, and referral from the emergency room were independent predictors of OM and a nonroutine DCS ($P < 0.05$ for all). In addition, DCS was associated with the patients' level of income and the expected payer. The use of the heart-lung machine did not affect OM but decreased the probability of a routine hospital discharge (odds ratio, 0.85; 95% confidence interval, 0.74-0.99; $P = 0.03$).

Conclusions: Although patients aged ≥ 80 years have acceptable CABG mortality, many require further specialized care upon discharge—a fact that should be emphasized during the preoperative informed consent process. In addition to patients' demographic and clinical risk profile, socioeconomic factors and the use of the heart-lung machine affected DCS.