

SCA 18
OFF PUMP CORONARY ARTERY SURGERY REDUCES
INCIDENCE OF STROKE - ANALYSIS OF 10,321 CASES

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Purpose: Although remarkable advances have been made in coronary artery surgery in the past decade, complications due to neurological injury continue to have a devastating impact on the overall outcome.

Aim of this study was to determine the incidence of stroke its risk factors in patients undergoing Off Pump Coronary Artery Bypass Surgery (OPCAB).

Also to compare our surgical group's performance to the international benchmarks.

Methods: This is a retrospective analysis of 10,321 patients who underwent isolated OPCAB during January 1995 through June 2003. Adult cardiac surgery database was used to develop 30 day risk-adjusted operative mortality (ROM) risk-adjusted morbidity (ROMB) model for stroke. Risk factors were selected using univariate screening multivariate logistic regression analysis. The

observed mortality stroke rates were compared with the predicted rates using National STS database .

Results: The incidence of post-operative neurological injury was 0.47%(n=49) the overall 30 day mortality was 0.96% whereas the Predicted as per (National Society of Thoracic Surgeons Cardiac Surgery Database Risk Mode for OPCAB) was 1.25% (p<.001) 2.3% (p<0.001) respectively. Mortality from neurological injury was 0.06%.

Multivariate logistic regression identified the following variables to be significantly associated with post-operative stroke: prior history of cerebrovascular accident (p=0.001: OR, 3.03, 95% CI 1.73-4.38), age >70 years (p=0.007: OR, 2.78, 95% CI 1.50-4.08), carotid artery disease (p=0.01: OR, 1.77, 95% CI 1.18-2.38), atherosclerotic aorta (p= 0.03: OR, 1.61, 95% CI 1.07-2.16) diabetes mellitus (p=0.05 : OR, 1.23, 95% CI 0.92-1.54).

Conclusions: OPCAB reduces the incidence of postoperative neurological injury 30 day mortality significantly. Several risk factors can be identified and some of these are amenable to intervention. Our results are comparable to the best in the world.