

Impact of Previous Percutaneous Coronary Interventions on Early Outcomes of Coronary Artery Bypass Surgery in Patients Undergoing Surgery within 12 Months after Coronary Stent Implantation

Background: Coronary artery disease (CAD) is presently the foremost cause of mortality globally and is anticipated to rise in the near future. Coronary artery bypass grafting (CABG) and percutaneous coronary interventions (PCIs) serve as alternate revascularization strategies for individuals with multi-vessel CAD.

Objective: To investigate whether previous history of PCI will affect morbidity and mortality outcomes in patients undergoing subsequent CABG or not, particularly if CABG was done within the first year after PCI.

Patients and methods: Over a six-month period, 100 patients with multi-vessel CAD who underwent isolated on-pump CABG in Nasser National Institute, Beni-Suef University, and Fayoum University. Patients were excluded if they were undergoing off pump CABG, combined CABG with other procedures, redo CABG, had poor myocardial contractility and patients who had severe preoperative comorbidities. Mortality and morbidity outcomes were analyzed and included 30-day mortality, length of hospital stay, postoperative reopening for bleeding, perioperative myocardial infarction (MI), and prolonged ventilation and arrhythmias.

Results: Total number of grafts in group A was higher than that of group B (3.16 ± 0.841 versus 2.64 ± 0.898 respectively), which was statistically significant (P value 0.003). The mean time of cardiopulmonary bypass (CPB) and aortic cross clamp time (ACC) were relatively higher in group B (87.6 ± 32.84 and 52.98 ± 19 respectively) than in group A (87.38 ± 27.29 and 50.38 ± 19.70 respectively) despite lesser number of total grafts in group B, which may denote poor targets in this group. Total morbidity including; length of hospital stay, postoperative reopening for bleeding, perioperative MI, prolonged ventilation and arrhythmias were higher in group B and it was statistically significant (P value 0.009).

Conclusion: Prior PCI may adversely affect the outcomes of later CABG in terms of morbidity and mortality if performed within one year before CABG.