Long-Term Outcome of CABG Patients Supported Preoperatively with IABP

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Objective(s): The purpose of our study is to evaluate early as well as long-term outcome of CABG patients supported preoperatively with Intra-aortic Balloon (IABP).
Methods: Out of 2658 isolated CABG operations performed between 1996 and 2001, 215 were supported preoperatively with IABP. Indications for IABP insertion were: (1) Cardiogenic shock (18; 8.4%), (2) Acute evolving Myocardial Infarction (MI) with critical coronary lesions (38; 17.7%), (3) Clinical instability (84; 39.1%), and (4) Critical coronary lesions (75; 34.9%).
Results: Operative mortality was 12.6%. Mortality of cardiogenic shock patients was higher (22.2%; P=0.174). Logistic regression showed patients' age (OR=1.057, 95% CI=1.010-1.108) and Cardio-Pulmonary Bypass (CPB) time (OR=1.020, 95% CI=1.008-1.031) to be associated with increased risk of operative mortality. An increased number of bypass grafts had a protective effect (OR=0.241, 95% CI=0.113-0.515). The actual early mortality was lower than the logistic "Euroscore" calculated mortality (12.6% vs. 32.8%, P<0.0001). Mean follow-up was 8±4 years. Actuarial 10 year survival was 49%. COX adjusted overall (early and late) survival, as well as Major Adverse Cardiac Events (MACE)-free survival and Major Adverse Cardiac or Cerebro-Vascular Events (MACCE)-free survival of the different IABP subgroups was similar. COX analyses showed Peripheral Vascular Disease (PVD), Off-Pump Coronary Artery Bypass (OPCAB) surgery, age, CPB time, female gender and fewer bypass grafts to be associated with decreased survival. Diabetes Mellitus (DM), repeat operation, OPCAB and longer CPB time were predictors of shorter MACE-free and MACCE-free survival.
Conclusions: In IABP supported patients, better early as well as long-term results are strongly related to younger age, shorter CPB time and greater number of bypass grafts. Avoiding use of CPB (OPCAB) is not recommended due to a significant decrease in overall survival and increased occurrence of MACE and MACCE.