

## **Comparison between Drug-Eluting Stents and BITA Grafting in Multi-Vessel Diabetic Patients**

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Background: Diabetic patients undergoing Percutaneous Interventions (PCI) or Coronary Artery Bypass Grafting (CABG) are at increased risk of late morbidity and mortality due to re-stenosis or graft occlusion compared to non-diabetic patients. Extensive use of arterial grafts for surgical revascularization and Drug Eluting Stents (DES) for PCI can improve late outcome in this subset of patients.

Methods: Two hundred and twenty six diabetic patients underwent left sided arterial revascularization using Bilateral Internal Thoracic grafting (BITA) between January 2002 and April 2006. They were compared with two hundred and seventy one diabetic patients who underwent PCI incorporating DES (Cypher). COX regression was used to define predictors of outcome events after forcing propensity score with patients' characteristics into the model.

Results: Mean follow-up was 62 months. Five years re-intervention-free survival (Kaplan-Meier) (86% vs. 65%, Log Rank,  $p=0.000$ ), as well as MACE (Major Adverse Cardiovascular Events)-free survival (81% vs. 54%,  $p=0.001$ ) were better in the BITA group. Assignment to the Cypher group was associated with decreased adjusted survival (HR 3.01 95% CI 1.59-5.73,  $p=0.000$ ), and increased risk of target vessel re-interventions (OR 7.00 95% CI 3.1-15.70). The adjusted risk of MACE increased with the number of vessels treated with DES.

Conclusions: In patients with Diabetes Mellitus, long-term angiographic revascularization as well as clinical outcome with BITA grafting is significantly better than that of PCI with DES.