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Five-year outcomes of surgical or percutaneous myocardial revascularization in diabetic patients

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Source

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Abstract

BACKGROUND:

The study compares five-year clinical outcomes of CABG vs PCI in a real world population of diabetic patients with multivessel coronary disease since it is not clear whether to prefer surgical or percutaneous revascularization.

METHODS:

Between July 2002 and December 2008, 2885 multivessel coronary diabetic patients underwent revascularization (1466 CABG and 1419 PCI) at hospitals in Emilia-Romagna Region, Italy and were followed for 1827 ± 617 days by record linkage of two clinical registries with the regional administrative database of hospital admissions and the mortality registry. Five-year incidences of MACCE (mortality, acute myocardial infarction [AMI], stroke, and repeat revascularization [TVR]) were assessed with Kaplan-Meier estimates, Cox proportional hazards regression and cumulative incidence functions of death and TVR, to evaluate the competing risk of AMI on death and TVR. The same analyses were applied to the propensity score matched subgroup of patients undergoing CABG or PCI with DES and with complete revascularization.

RESULTS:

PCI had higher mortality for all causes (HR: 1.8, 95% CI 1.4-2.2 $p < 0.0001$), AMI (HR: 3.3, 95% CI 2.4-4.6 $p < 0.0001$) and TVR (HR: 4.5, 95% CI 3.4-6.1 $p < 0.0001$). No significant differences emerged for stroke (HR: 0.8, 95% CI 0.5-1.2 $p = 0.26$). The higher incidence of AMI caused higher mortality in PCI group. Results did not change comparing CABG with PCI patients receiving complete revascularization or DES only.

CONCLUSIONS:

Diabetics show a higher incidence of MACCE with PCI than with CABG: thus diabetes and its degree of control should be considered when choosing the type of revascularization.