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Even After Recent ACS, Diabetic Patients With Multivessel Disease Fare Better With CABG

Five years after FREEDOM, the debate continues: new data are further validating the long-term cardiovascular benefits of surgery.

By L.A. McKeown December 11, 2017

Patients with diabetes and multivessel coronary artery disease have fewer adverse events, including death and MI, with a surgical revascularization versus PCI, according to results from a Canadian registry. Importantly, the long-term advantage of surgery was evident in patients with and without ACS.

"The early and late benefits seen with CABG in our cohort of mainly ACS patients raise the possibility that in the current era, further gains may be made by moving beyond ad hoc PCI as the default procedure in diabetic patients with [multivessel] CAD," write study authors led by Krishnan Ramanathan, MB, ChB (University of British Columbia, Vancouver, Canada).

The registry results are closely aligned with those of the randomized FREEDOM trial, which demonstrated an advantage for CABG over PCI in the form of lower rates of MACCE (composite of all-cause mortality, nonfatal MI, and nonfatal stroke). The FREEDOM investigators also reported a borderline reduction in the individual endpoint of all-cause mortality favoring CABG over PCI with DES.

Unlike in FREEDOM, many more patients in the Canadian registry had recent ACS. According to Ramanathan and colleagues, their registry sought to assess the real-world generalizability of FREEDOM and analyze the ACS subgroup. Among those with ACS in the registry, 65.2% underwent PCI and 34.8% underwent CABG.

Registry Raises New Questions

Compared with PCI, CABG patients had lower rates of MACCE (3.3% vs 6.1%) and MI (1.1% vs 4.5%), while PCI patients had lower rates of stroke (0.6% vs 1.4%; $P < 0.01$ for all). The individual endpoint of death did not differ between the two groups. Following multivariable adjustment, the MACCE risk still favored CABG.

The researchers then looked at the impact of the revascularization strategy on the outcome of MACCE by presentation type (ACS or stable ischemic heart disease). Among ACS patients, MACCE risk strongly favored CABG (adjusted OR 0.49; 95% CI 0.34-0.71). Among those with stable disease, however, MACCE risk did not vary by choice of revascularization strategy.

The adjusted OR for MACCE also favored CABG over PCI in patients with triple-vessel disease. A similar advantage was not seen for patients with two-vessel disease, however.

Looking longer term, rates of MACCE and its individual components, with the exception of stroke, were lower in CABG patients from 31 days to 5 years in the overall population. All-cause mortality was 52% lower, MI was 60% lower, stroke was 20% lower, and repeat revascularization was 72% lower.

Unlike the early results, the late results (31 days to 5 years) showed that both ACS and stable patients benefited in terms of lower MACCE rates with CABG versus PCI. For both groups, the reduction in MACCE was 33%.

The registry study was conducted between 2007 and 2014,