Left Main PCI Outcomes Improve With DES

BY HEIDI SPLETE

More than two-thirds of patients who were treated with stents for unprotected left main coronary artery disease were alive 10 years later, and patients who received drug-eluting stents had significantly fewer adverse events than did those who had bare metal stents, on the basis of data from 252 adults.

"Unprotected left main coronary artery disease (ULMCA) occurs in 3%-5% of coronary artery disease patients and is the subject of intense investigation," wrote Dr. Pawel E. Buszman of the Medical University of Silesia in Katowice, Poland.

Current guidelines recommend that patients with ULMCA be revascularized with coronary artery bypass surgery. To evaluate the outcomes of stenting in this subset of patients, Dr. Buszman and his colleagues reviewed data from patients who underwent percutaneous coronary intervention to treat left main artery stenosis between January 1997 and March 2008. PCI was performed in these patients rather than surgery because of anatomical suitability, high surgical risk, or patient preference. The average age of the patients was 69 years (J. Am. Coll. Cardiol. 2009 Aug. 19 [doi: 10.1016/j.jacc.2009.07.007]).

A total of 158 patients received bare metal stents (BMS) and 94 received drug-eluting stents (DES). Overall, angiographic success was achieved in 98% of the patients.

Angiographic success was defined as less than 30% residual stenosis of the left main artery, a minimal lumen diameter of at least 3 mm, a thrombolysis in myocardial infarction flow grade of 3, and no dissection.

During a short-term follow-up period of 30 days, major adverse cardiovascular and cerebral events (MACCE) occurred in 12 patients (5%) and 4 patients died (2%).

The long-term follow-up period ranged from 1 to 11 years, with an average follow-up period of 3.8 years. Based on a Kaplan-Meier analysis, the 5-year and 10-year survival rates were 78% and 69%, respectively.

During long-term follow-up, MACCE occurred in 64 patients (25%), including 25 MIs, 21 target lesion revascularizations, and 3 strokes. Of the 35 patients who died (14%), 28 were considered cardiac deaths. "There was significantly better long-term survival in patients with isolated left main coronary artery disease (LM) or LM with 1- and 2-vessel disease when compared with LM with 3-vessel disease," the researchers said.

The patients in the DES group were significantly more likely to have a higher surgical risk and a higher incidence of left main artery stenosis than were the patients in the BMS group. But the unadjusted occurrence of major adverse cardiovascular and cerebral events was significantly lower in the DES group compared with the BMS group (15% vs. 26%), the researchers noted. "Further propensity score matching and data adjustment confirmed and strengthened those findings," they said.

There were no significant differences between the stent groups in terms of death, myocardial infarction, stroke, or target lesion revascularizations.

The study was limited by the low rate of angiographic follow-up and an inconsistent use of intravascular ultrasound to evaluate the result of the stenting, the authors wrote.

But the favorable feasibility and outcome results supported data from previous studies, the researchers said. In contrast to previous studies, there was no significant difference in survival or major adverse event rates in patients with distal left main coronary artery compared with the proximal/medial left main coronary artery.

The findings are the first prospective data on long-term results of left main coronary artery stenting, using patients in the Left Main Coronary Artery Stenting (LE MANS) registry. The high procedural success rate and low rates of periprocedural mortality (1.3%) and major adverse events suggest that the stents are safe and feasible for ULMCA, the researchers noted. "Based upon the mounting evidence, there can be little dispute at this juncture that PCI can be offered as a safe alternative to CABG for a significant number of patients with left main disease, particularly nondiabetics without extensive concomitant artery disease," Dr. Jeffrey Moses of Columbia University, New York, and his colleagues wrote in an accompanying editorial (doi:10.1016/j.jacc.2009.07.016).

Neither Dr. Buszman nor Dr. Moses disclosed financial conflicts of interest. Previously, Dr. Moses disclosed that he was on the speakers bureau for and received honoraria from Cordis, Johnson & Johnson, Boston Scientific, and Sanofi, and was an adviser to Cordis and Johnson & Johnson. Dr. Buszman previously disclosed that he had no financial conflicts of interest. ■