The Use of Drug-Eluting Stents in Patients with ST-Elevation Myocardial Infarction Increases Mortality Compared to Bare Metal Stenting at 2-Years

According to results presented by P. Gabriel Steg, MD, Hôpital Bichat-Claude Bernarde, Paris, France, the use of drug-eluting stents (DES) vs bare metal stents (BMS), in patients with ST-elevation myocardial infarction (STEMI) increases all-cause mortality at 2 years.

Prof. Steg presented the results of an analysis from GRACE (Global Registry of Acute Coronary syndromEs), an ongoing, observational registry of patients with ACS hospitalized in 94 hospitals in 14 countries across 4 continents. The analysis is based on data from 6,447 patients who received either DES (n=2,126) or BMS (n=4,321).

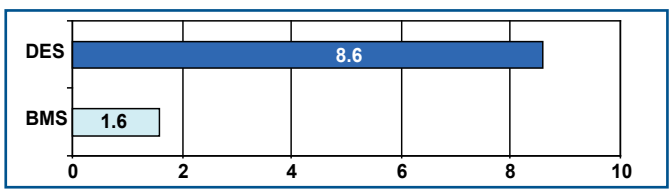
All Patients

Overall, patients with acute coronary syndrome (ACS) who had a DES implanted had a significantly lower in-hospital death rate (1.1%) than BMS patients (2.7%; p<0.0001), although mortality of the two groups was identical at 6 months (2.2% BMS; 2.3% DES). The use of dual antiplatelet therapy, (70% for DES vs 50% for BMS), was significantly higher in DES patients at 6 months (p<0.001). This difference continued up to the 2-year follow-up, at which point 38% of DES patients were still receiving dual antiplatelet therapy vs 12.9% of patients with BMS (p<0.001).

Between 6 months and 2 years there was a significant difference in the rate of reinfarction in favor of BMS (2.9%) vs DES (5.4%) (p=0.046). However, no difference in mortality between 6 months and 2 years (DES 4.8%, BMS 4.6%) was found in the overall cohort of patients with ACS.

When patients were analyzed based on a diagnosis of STEMI or non-STEMI/unstable angina (NSTE-ACS), there was a significant difference in mortality rate between STEMI patients who received DES (8.6%) vs those who received BMS (1.6; p<0.001; Figure 1).

Figure 1. Mortality – STEMI Patients - 6 Months to 2 Years.



STEMI Patients

Of the 2,298 patients in the STEMI population, 569 received DES and 1,729 received BMS. At 6 months the unadjusted rate of hospital mortality was significantly lower in DES (2.0%) vs BMS (3.8%) patients (p=0.018). A landmark analysis was performed to compare post-discharge survival between the two stent groups. Results of this analysis showed no difference in risk for the two groups between hospital discharge and month 6 (HR 0.99) but a marked increase in the risk of death for STEMI patients treated with DES began at month 6 and continued to 2 years (HR 4.67). A significant increase in the risk of death at 2 years persisted after adjustment for GRACE risk score, number of dilated vessels, diabetes, and type of PCI (HR 6.69; p=0.002).

Although acknowledging the limitations of observational studies, according to Prof. Steg, these data suggest that DES should be used cautiously in patients with STEMI until further evidence of long-term safety is accumulated. "There is now a need for a large prospective randomized trial with long-term follow-up," said Prof. Steg.

Lowering Blood Pressure in Patients with Type 2 Diabetes Significantly Reduces the Risk of Death from Diabetic Complications Even in Patients with Normal Blood Pressure

Data from the ADVANCE study (Action in Diabetes and Vascular Disease) presented by Stephen MacMahon, MD, The George Institute for International Health, Australia, demonstrated that lowering blood pressure in patients with diabetes significantly reduces mortality. The benefits were evident independent of baseline blood pressure and whether patients were receiving concomitant treatment with other blood pressure-lowering, lipid-lowering, or antiplatelet therapies.

The UK Prospective Diabetes Study showed that lowering systolic blood pressure (SBP) from 155-145 mmHg in diabetic patients with hypertension resulted in a significant reduction in mortality (Turner R et al. *BMJ* 1998). The objectives of the current study were to determine whether additional benefits could be achieved by further lowering SBP to <145 mmHg, whether the benefits would be similar for non-hypertensive patients, and whether those benefits would be in addition to those produced by other cardiovascular preventive therapies.