Abstract 4503: How Safe Are Drug Eluting Stents in Octogenarians Treated With Primary Percutaneous Coronary Intervention for Acute Myocardial Infarction?

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Background. Percutaneous coronary intervention (PCI) is the method of choice in the treatment of acute ST-T elevation myocardial infarction (STEMI). The use of drug eluting stents (DES) in the setting of STEMI in the elderly population is controversial.

Methods. A retrospective analysis of the Myocardial Infarction Data Acquisition System (MIDAS) registry for the years 2003 and 2004 with respect to the use of DES and BMS in the setting of primary PCI for STEMI in patients age ≥80 years was performed. The total and cardiovascular mortality was analyzed from the NJ death registry files over 3 years after the index procedure.

Results. 578 patients age ≥80 years with STEMI treated with primary PCI were identified during 2003 and 2004. 364 (62.97%) received one BMS and 214 (37.02%) received one DES. Caucasians were treated more with BMS than non-Caucasians (p=0.0002) and diabetics with DES than BMS (p=0.03). No significant differences with regard with the type of stent used were observed for age, sex, history of hypertension, previous stroke, MI, renal disease, cancer, anterior wall MI on presentation, use of Gp2b/3a during the PCI, LV dysfunction and arrhythmias noted during the index hospitalization (p=ns). At 3 years follow up, total mortality was 41.8% for the BMS group and 23.4% for the DES group (p=0.0002); the cardiovascular mortality was 25.8% for BMS and 15.9% for the DES subjects (p=0.02).

After adjusting for the baseline characteristics (age, sex, race, diabetes, hypertension, renal disease, anemia, cancer, prior MI, cerebrovascular disease, Gp2b/3a use, transfusion, location of MI) the hazard ratio was 0.55 (CI 0.44 – 0.73; p=0.005) for all cause mortality and 0.63 (CI 0.42– 0.95) for cardiovascular mortality in the favor of the DES.
Conclusions. The use of DES during primary PCI for STEMI in octogenarians is associated with a significant reduction in all cause mortality and cardiovascular mortality when compared with BMS.