Stents - Bare Metal

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TCT-638

Five-Year Clinical Outcomes of Drug Eluting Stents Versus Bare Metal Stents in Patients With Large Vessel and Single Coronary Lesion

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Background: The aim of this study is to evaluate long-term clinical outcomes of drug-eluting stent (DES) and bare metal stent(BMS) with large vessel diameter and single coronary lesions for 5 years.

Methods: A total of 428 consecutive patients who visited 3 medical centers from March 2003 to April 2007 and had a single coronary lesion which was treated with the use of a DES or BMS that was more than 3.5 mm in diameter were enrolled in this study. Patients were divided into 2 stent groups: DES (n=209), BMS (n=129). The study end point was a composite of major adverse cardiac events (MACE) including death, myocardial infarction (MI), and target-vessel revascularization (TVR) for 5 years.

Results: Baseline characteristics were not different. 5 years follow up rate was 82.5% (12% in BMS vs. 10.6% in DES, p=0.694). The rate of MI (2.4% in DES, p=0.592) and TVR (12% in DES vs. 10.6% in BMS, p=0.694) were not different. There was no difference in MACE-free survival rate between the DES group and the BMS group (93.1% in DES vs 90.7% in BMS; P=0.472).

Conclusions: Clinical outcomes between DES and BMS are similar in a large vessel diameter and single coronary arterial lesion for 5 years.

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Impact Of The Length Of Bare Metal Stent On Clinical Events After Percutaneous Coronary Intervention In Current Clinical Practice

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Background: Stents length has traditionally been considered a predictor of events after percutaneous coronary intervention (PCI), especially with bare metal stents (BMS). This fact has encouraged interventional cardiologist to cover severe lesions with the least possible stent length (“spot-stenting technique”). However, newer stents may have reduced the importance of its length in the prediction of events. Objective: To assess the impact of the length of bare metal stents in cardiovascular events after PCI.

Methods: We prospectively included 243 lesions treated with PCI and a long BMS (>30 mm) in 218 consecutive patients (76.9% male, 68.7±11.1 years) from January 2012 to April 2013. After a minimum follow-up of 1 year, we evaluated the presence of major cardiac adverse events (MACE): mortality, nonfatal myocardial infarction (MI), stent thrombosis (ST), need for target lesion revascularization (TLR).

Results: 40% had stable ischemic heart disease, 27.5% Non-STEMI and 32.5% STEMI. 35.9% were diabetic. Vessel treated with a long BMS was the last anterior descending (LAD) in 10.7% of cases, circumflex in 5.4%, right coronary artery (RCA) in 82.1% and saphenous vein graft in 1.8%. 1.8% were bifurcations, 7.1% chronic total occlusions and 25% acute occlusions. Mean stent length and diameter were 35.6±3.2mm and 3.4±0.4mm. Predilatation was done in 51.8% of lesions and postdilatation in 23.2% of them. Maximum inflation pressure was 17.3±1.5 atm. Angiographic success was 100%. One year MACE rate was 7.1%: 6 patients died (2.46%); 3 of them had cardiogenic shock and died during the first day of admission and 3 died for non cardiovascular causes. No MI neither ST were observed. TLR rate was 1.8%. MACE rate and results were comparable with those of a similar cohort treated with DES < 30 mm.

Conclusions: In current clinical practice, newer generations of long stents allow not only to treat increasingly complex lesions, but also, we can reduce the number of stents per procedure resulting in a substantial economic impact. With new designs and materials, the length of BMS is not such an important predictor of adverse events as in the past, especially avoiding small vessels and bifurcated lesions.