TCT-600

Angiographic and clinical outcomes of paclitaxel coated balloon angioplasty versus uncoated balloon angioplasty in Drug Eluting Stent Restenosis: Insights from the PEPCAD-DES study

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Background: In PEPCAD-DES late loss as well as the need for repeat revascularization was significantly reduced with drug coated balloon (DCB) angioplasty compared with plain old balloon angioplasty (POBA) for drug-eluting stent (DES) restenosis (clinical trials.gov NCT00998439). We now evaluated whether the use of DCB is different in paclitaxel DES restenosis or non-paclitaxel DES restenosis.
Methods: 110 patients with a DES restenosis of either Sirolimus- (SES), Everolimus- (EES) or Paclitaxel-eluting (PES) stents in a native coronary artery with indication for percutaneous coronary intervention with a reference diameter ranging from 2.5mm to 3.5 mm and lesion length less or equal to 22 mm were randomized to treatment with either DCB or POBA in six centers. 38 patients were randomized to POBA and 72 patients to DCB. Patients suffered from repeat restenotic lesion (≥2nd) in 55.6% (N=50) in DCB group and 52.6% (N=20) in POBA population. In the DCB group restenosis was located in SES (N=41, 56.9%), PES (N=20, 27.7%) or EES (N=11, 15.3%). Numbers for POBA group were SES (N=27, 71.1%), PES (N=7, 18.4%) or EES (N=3, 13.2%).
Results: DCB as compared with POBA significantly reduced late loss in PES restenosis and non-PES restenosis with 0.46±0.50mm vs. 1.58±1.03mm (p=0.002) and 0.31±0.54mm vs. 0.90±0.67mm (p<0.001), respectively. Furthermore, TLR rates were lower with DCB versus POBA for PES restenosis (5% vs. 57.1%, p<0.001) and non-PES restenosis (18.5% vs. 32.3%, p=0.002). Late loss did not differ for PES versus SES lesions with DCB treatment (0.46 vs. 0.31mm, p=0.123). DCB was superior to POBA for treatment of a first restenosis and for ≥second restenosis with a late loss of 0.35±0.60mm vs. 0.65±0.60mm (p=0.128) and 0.49±0.61mm vs. 1.34±0.76mm (p<0.001), respectively.
Conclusions: Paclitaxel coated balloon angioplasty was superior to POBA for treatment of PES and non-PES restenosis. DCB effect on late loss did not differ between type of DES.

Bare Metal and Drug-Eluting Stents

Hall D

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TCT-601

Real-world experience of the polymer-free rapamycin-eluting YUKON-Choice stent: five-year results from a prospective registry

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Background: Drug-eluting stents constitute a major achievement in preventing restenosis, concerns remain regarding the increased inflammatory and thrombogenic responses associated with the polymers used. This analysis focuses on outcomes in patients receiving the polymer-free microporous rapamycin-eluting stent system YUKON-Choice (Yukon-DES, Translumina, Hechingen, Germany).
Methods: From 01/2006-09/2008 all consecutive patients (pts) receiving Yukon-DES (≥2,5mm diameter) were prospectively enrolled in our registry. 6-months angiographic and long-term clinical outcomes were analysed. The primary endpoint was cumulative long-term major adverse cardiac events (MACE).
Results: 701 pts with 724 lesions (1050 stents) were included in our registry. Mean age was 65.7±10 years (73% male). Risk factors included hypercholesterolemia (57.6%), hypertension (74.8%), and diabetes (35.5%); table 1. Indication for percutaneous coronary intervention was acute coronary syndrome in 32.2%. 76% of the lesions were of Type B2/C, target vessel was left anterior descending artery in 35.2%, and 23.2% were chronic total occlusions. Lesion length was 24.6±5.2 mm and mean stent diameter was 2.8±0.4 mm; table 1. A total of 511 pts (72%) underwent 6-months angiographic follow-up, binary restenosis was noted in 23.5%. At 5 years clinical outcomes of 625/701 (89%) followed patients were: cardiac death 5.8%; myocardial infarction 3.4%; and target vessel revascularisation 24.6%. The cumulative five-year incidence of MACE was 35.4% (6.7% per year). Incidence of stent thrombosis (ST) was 2.86% (30/1050) [definite 0.86%; probable 0.29%; possible 1.8%]. Incidence of very late (>1 year) definite/possible ST was 0.29%)].

Baseline characteristics	
Age (years)	65.7 ± 10
Male	512 (73.0%)
History of PCI	372/701 (53.1%)
History of CABG	130/701 (18.5%)
History of MI	401/701 (57.2%)
Clinical presentation	
Acute coronary syndrome	226/701 (32.2%)
Stable angina/silent ischemia	475/701 (67.8%)
Current smoker	149/701 (21.3%)
Hypertension	524/701 (74.8%)
Diabetes	249/701 (35.5%)
Insulin treated	89/701 (12.7%)
Hypercholesterolemia	404/701 (57.6%)
Renal insufficiency	67/701 (9.6%)
Left ventricular ejection fraction	
Mean	54.8±13.7%
Range	9-88%
Angiographic characteristics	
Lesion length >24 mm	171 (23.6%)
ACC/AHA lesion type B2/C	555 (76.6%)
Lesion in bypass graft	72 (9.9%)
Pre-index procedure ISR	109 (15.1%)
Total occlusion	168 (23.2%)
Left main artery lesion	11 (1.5%)
Left anterior descending artery lesion	255 (35.2%)
Right coronary artery lesion	231 (31.9%)
Left circumflex lesion	227 (31.2%)
Bifurcation lesion	53 (7.3%)
Multiple study stents	253 (34.9%)
Predilatation performed	277 (26.4%)
Postdilatation performed	105 (10%)
Maximum postdilatation pressure (atm)	
Mean	15.3 ± 5.1
Range	8 – 25
Maximum stent deployment pressure (atm)	
Mean	15.6 ± 1.7
Range	8 – 24
Mean stent diameter (mm)	2.8 ± 0,4 mm
Total study stent length (mm)	24.6 ± 5.2

Conclusions: Our registry data suggests that the implantation of YUKON-DES is feasible and safe, but binary restenosis and target vessel revascularisation were frequently observed.

TCT-602

Abstract Withdrawn

TCT-603

Proximal Coronary Artery Stenting: DES Versus BMS and LAD Versus the Rest

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Background: Proximal coronary artery disease is associated with a poorer prognosis compared to disease in the distal coronary arteries. PCI of a culprit lesion in the left anterior descending artery (LAD) may have a worse prognosis than PCI of the proximal left circumflex (LCX) or right coronary arteries (RCA). The possible disparity in risk may be attenuated by stenting strategy. The aim of the present study was to evaluate outcome after PCI of solitary proximal stenoses of the LAD as compared to the LCX and the RCA.
Methods: We used data from the Swedish angiography and angioplasty registry (SCAAR), a national registry including all patients undergoing percutaneous coronary intervention (PCI) in Sweden. From 2005 to 2011 all cases of proximal one- vessel disease, treated with PCI, were identified. The patients were stratified according to culprit

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