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IMPACT OF LESION LENGTH ON OUTCOMES AFTER REVASCULARIZATION WITH EVEROLIMUS AND SIROLIMUS ELUTING STENTS. A SUBSTUDY OF THE SORT OUT IV TRIAL

i2 Poster Contributions

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Background: Randomized trials comparing outcomes after implantation of first generation drug-eluting stents (DES) versus second generation DES in long lesions are limited. Stenting of long lesions might be associated with higher rates of adverse events. In this substudy of the SORT OUT IV trial, we assessed the impact of lesion length on clinical outcome among patients treated with everolimus-eluting stents (EES) or sirolimus-eluting stents (SES).

Methods: "All-comer" patients (n=2,774) were randomized to EES and SES. Post hoc stratified analysis of clinical outcome was performed for lesion length ≤ 18 mm (short) versus >18 mm (long). The composite endpoint was major adverse cardiac events (MACE), defined as a composite of cardiac death, myocardial infarction (MI), stent thrombosis, or target vessel revascularization (TVR) within 18 months.

Results: Of 2,774 patients, 383 EES treated patients with 417 lesions and 367 SES treated patients with 395 lesions had only short lesions treated. 890 EES treated patients with 1,107 lesions and 900 patients with 1,110 lesions had only long lesions treated. MACE was significantly higher among patients with long lesions compared to patients with short lesions: 8.8% vs. 6.2%, Hazard Ratio (HR) 1.45, 95% confidence interval (CI) 1.07-1.97. TVR was seen more often in patients with long lesions: 6.1% vs. 4.3% (HR 1.45, 95% CI 1.00-2.08). Definite stent thrombosis did not differ significantly between patients with long and short lesions: 1.9% vs. 1.4% (HR 1.35, 95% CI 0.70-2.59). In patients with long lesions, clinical outcomes in EES treated patients did not differ significantly to SES treated patients; MACE 8.6% vs. 9.1% (HR 0.95, 95% CI 0.59-1.55), cardiac death 2.9% vs. 1.6% (HR 1.77, 95% CI 0.65-4.78), MI 1.6% vs. 2.7% (HR 0.57, 95% CI 0.21-1.57), and TLR 3.1% vs. 3.0%, (HR 1.05, 95% CI 0.46-2.37). Definite stent thrombosis was seen not seen in patients with long lesions treated with EES compared to 4 patients treated with SES.

Conclusions: Long lesions had higher MACE compared to short lesions. EES and SES appear similar with respect to MACE in patients with long lesions. However, definite stent thrombosis was not seen among patients with long lesions treated with EES.