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Three-year Clinical Outcomes of Patients with Drug-eluting Stents in Diffuse Long Lesions; Comparison of Sirolimus-eluting Stent versus Everolimus-eluting Stent

Background: First generation drug-eluting stent (DES) has remarkably reduced in-stent restenosis. And second generation DES have been developed to overcome safety concerns and maintain the efficacy similar to first generation DES. But limited data are available on comparison of efficacy and safety between first generation drug-eluting stent (DES) and second generation DES in diffuse long coronary artery lesions. The aim of this study is to compare clinical outcomes between sirolimus-eluting stent and everolimus-eluting stent in patients with diffuse long lesions for 3 years.

Methods: 370 patients with diffuse long lesion treated with less than 50 mm stent segment in de novo lesions were enrolled. The patients were divided into two groups as sirolimus eluting stent (SES, n=340) group and everolimus eluting stent (EES, n=215) group. Study end-points were major adverse cardiac events (MACE) including all death, myocardial infarction (MI), and ischemic driven target vessel revascularization (Id-TVR).

Results: The proportion of patients who had stable angina was higher in SES group (38.1% vs. 17.7%, $p < 0.001$), on the contrary the proportion of acute coronary syndrome is higher in EES group (61.5% vs. 79.6%, $p < 0.001$). At 8 month follow-up, late luminal loss was statistically higher in EES group (0.79 ± 0.44 vs. 0.53 ± 0.58, $p < 0.002$). In clinical outcomes, there was no significant difference between two groups through three year and beyond 1 year after PCI.

Conclusion: The clinical outcomes between SES and EES in patients with diffuse long lesions were not different for 3 years.