Comparison of Sirolimus Versus Paclitaxel Eluting Stents for Treatment of Coronary In-stent Restenosis

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Background: In patients with in-stent restenosis (ISR) inside bare metal stents, drug-eluting stents [DES] reduce the recurrence of restenosis compared with balloon angioplasty. However, few data are available which compare the different stents in these cases.
Aim: To evaluate the immediate and mid-term outcome of sirolimus- [SES] and paclitaxel- [PES] eluting stent implantation in diffuse ISR and determine the predictors of clinical and angiographic restenosis recurrence.
Methods: A series of 253 consecutive patients with 261 ISR lesions [including 91 diffuse ISR lesions] treated with DES implantation were evaluated. Major adverse cardiac events were defined as death, myocardial infarction, and the need for target lesion revascularization.
Results: Table depicts results according to SES or PES.

	SES (N=216)	**PES (N=37)**	**P-value**
Age (years)	63±11	62±10	0.7
Males (%)	76	70	0.8
DM (%)	50	57	0.4
Diffuse ISR (%)	36	26	0.2
RVD mm	2.8±0.6	2.9±0.8	0.2
Mean stents Diameter mm	3.0±0.3	3.0±0.6	0.7
6 months outcome			
Death (%)	1.9	0	0.4
Re-AMI	1.4	2.9	0.5
Stent thrombosis	2.3	0	0.3
Target vessel revascularization (%)	6.9	5.4	0.7
CABG	1	2.9	03
MACE	8.9	8.6	0.9
12months outcome			
Death (%)	2.4	0	0.4
Re-AMI	2.9	6.5	0.3
Target vessel revascularization (%)	9.7	6.7	0.6
CABG	2.4	3.3	0.7
MACE	13.6	12.9	0.9

By multivariate analysis, post stenting MLD<2.5mm was confirmed to be the only independent predictor of recurrent restenosis (odds ratio 4.4, 95% confidence interval 1.4-14, p = 0.009).
Conclusion: Both SES and PES implantation for ISR is associated with acceptable clinical results. Small vessel is an unfavorable condition leading to a high risk of recurrence.