

Late outcomes of patients receiving DES following rotational atherectomy in severely calcified lesions: SES vs. BES vs. EES

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[Background] There are few reports comparing the late outcomes of SES, BES, or EES implantation after rotational atherectomy (RA) in severely calcified lesions.

[Objective] To compare the late outcomes of SES, BES, or EES implantation following RA in severely calcified lesions. [Subjects] Subjects were 83 patients with 131 lesions who received SES, BES, or EES after RA in a severely calcified lesion from May 2004 to Mar 2013. The subjects were classified into the group treated by SES (S group: 52 patients, 73 lesions), by BES (B group: 10 patients, 20 lesions), and by EES (E group: 21 patients, 38 lesions), and were compared for TLR, MACE (death, AMI, TLR) at 12 months.

[Results] There was no significant difference in age or gender. No significant difference was revealed in reference diameter (2.82 ± 0.37 vs. 2.87 ± 0.26 vs. 2.94 ± 0.34 mm) or stent size (2.90 ± 0.13 vs. 2.82 ± 0.22 vs. 2.91 ± 0.18 mm). There was no significant difference between the groups in restenosis (28.2 vs. 28.5 vs. 22.2%; $P=n.s.$). There was also no significant difference between the groups in TLR (23.9 vs. 21.4 vs. 14.8%; $P=n.s.$). MACE-free survival rate using the Kaplan-Meier method revealed a significant difference between the S group and E group (80.8% vs. 86.7%, $p < 0.05$), and also a significant difference between the B group and E group (70.0% vs. 86.7%, $p < 0.05$).

[Conclusion] The results of this study suggest that EES may be more effective than SES and BES in DES implantation after rotational atherectomy in severely calcified lesions.