ONE-YEAR OUTCOME OF SMALL-VESSEL DISEASE TREATED WITH SIROLIMUS-ELUTING STENTS: A SUBGROUP ANALYSIS OF THE E-SELECT REGISTRY


Background: Although there have been reports on outcomes associated with DES use for small vessel disease (SmVD) treatment, large scale registry data are lacking. Objectives of the study is to investigate the characteristics and 1-year outcomes following sirolimus-eluting CYPHER stent (SES) implantation in SmVD in the international e-SELECT registry, conducted in 320 hospitals and 56 countries:

Methods: Treatment of SmVD only (<2.5mm estimated reference vessel diameter) was done in 3,179 patients (21%) while treatment of non-small-vessel disease (NSmVD) only was performed in 10,115 patients (67%). 1853 patients (12%) combining both SmVD and NSmVD target lesions were excluded.

Results: The SmVD patient population was older (63.0 vs. 61.7 years, p<0.001), with a higher proportion of women (30.7% vs. 23.0%, p<0.001), diabetics, (34.9% vs. 28.6%, p<0.001); and higher mean Charlson Comorbidity Index score (CCI) (1.2+1.5 vs. 1.0+1.2, p<0.001). Patients with SmVD had lower rate of STEMI (6.5% vs. 7.6%, p<0.001), shorter lesions (19.1 mm vs. 20.8 mm, P<0.001) and fewer treated vessels (1.08 vs. 1.12, p<0.001).

The incidence of MACE [any death, MI or TLR] (5.4% vs. 4.4%, p=0.02), MI (2.5% vs. 1.7%, p=0.004), and clinically indicated TLR (3.0% vs. 1.8%, p=0.003) was significantly higher at 1 year in patients with SmVD. The incidence of death was 1.6% in both groups. The rate of ARC-defined “definite or probable” stent thrombosis (ST) was significantly higher in the SmVD group (1.6% vs. 0.8%, p<0.001), mainly driven by a higher incidence of early (0-30 days) ST (1.0% vs. 0.5%, p=0.001). The multivariate predictors for the SmVD group for MACE at 1 year included index procedure-related ST, need for pre-dilatation, in-stent restenosis as a target lesion, higher CCI, and bifurcation target lesion.

Conclusions: This study of one of the largest cohorts of SmVD confirms that SES implantation for SmVD occurs more frequently in women, diabetics, those with comorbidities. Death rates at 1 year is similar to that patients with NSmVD, while the incidence of MACE, MI, clinically indicated TLR and ST is higher in patients with SmVD, it remains low overall, demonstrating safety of SES deployment in this cohort.