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Comparison of biodegradable polymer (Everoflex) vs. permanent polymer (Xience Pro) coated everolimus-eluting coronary stent systems in all-comer patient population at a tertiary care hospital - One-year outcome study

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THEME: Coronary Interventions

TOPIC(S): STEMI, NSTEMI, Stents and scaffolds

AIMS

We sought to evaluate safety and efficacy of Everoflex (Sahajanand Medical Technologies Pvt Ltd, Surat, India) and Xience Pro (Abbott Vascular, Abbott Park, Illinois) coronary stents in daily clinical practice at a tertiary care center.

METHODS AND RESULTS

It is a single-center, non-randomized, prospective registry consisting of two cohorts - Everoflex and Xience Pro. Each cohort consisting of 327 consecutive patients who underwent percutaneous coronary intervention with Everoflex and Xience Pro stents respectively between January and December, 2015. The primary end-point was incidence of cardiac death, myocardial infarction and target lesion revascularization. Secondary endpoint was composite of device oriented end-points as well as patient oriented outcomes comprising overall mortality, any myocardial infarction and repeat revascularization. The mean age of the Everoflex and Xience Pro groups was 56.7±10.4years and 55.6±9.7 years (p=NS) respectively. Both the groups were matched in terms of gender, risk factors, ejection fraction, severity of the disease and infarct related artery. The average diameter and length of stents were 2.83±0.29mm and 25.12±8.70 mm in Everoflex group, 2.82±0.31 mm and 19.81±7.61 mm in Xience Pro group. Device related outcomes at 1-year follow up: Cardiac death, myocardial infarction, target vessel revascularization (TVR) and target lesion revascularization (TLR) were reported in 02 (0.6%), 07 (2.2%), 06 (1.8%) and 06 (1.8%) patients in Everoflex group whereas in Xience Pro group it was 05 (1.5%), 7 (2.1%), 04 (1.2%) and 04 (1.2%) respectively. In Everoflex group, Stent thrombosis was reported in 03 (0.9%) patients, of which 01 (0.3%) was sub-acute and 02 (0.6%) were late where as in Xience Pro group it was reported in 02 (0.6%) patients and both were late. In-stent restenosis was found in 03 (0.9%) and 02 (0.6%) patients in Everoflex and Xience Pro groups respectively. At 1-year follow-up, overall mortality was 0.6% and 1.5%; and survival rate was 99.4% and 98.5% in Everoflex and Xience Pro groups respectively.

CONCLUSIONS

At 1-year follow-up, Everoflex and Xience Pro stents are safe with low risk of stent thrombosis, in-stent restenosis and higher survival rates in all-comers patient population. Everoflex group showed a slightly higher mortality benefit than Xience Pro, this finding may be because of thinner strut size and biodegradable polymer used in Everoflex. A larger multi centric study with longer follow-up will be useful to establish these findings.