J Am Coll Cardiol. 2006 Oct 3;48(7):1312-8. Epub 2006 Sep 14.

Clinical outcomes for sirolimus-eluting stents and polymer-coated paclitaxel-eluting stents in daily practice: results from a large multicenter registry.

Saia F, Piovaccari G, Manari A, Santarelli A, Benassi A, Aurier E, Sangiorgio P, Tarantino F, Geraci G, Vecchi G, Guastaroba P, Grilli R, Marzocchi A.

OBJECTIVES: We compared the clinical outcome of sirolimus-eluting stents (SES) and paclitaxel-eluting stents (PES) in a real-world scenario.
BACKGROUND: In selected patients, SES has been associated with lower late luminal loss than PES. Whether this emerging biological difference could translate into different clinical efficacy in daily practice is presently unknown.
METHODS: This analysis included 1,676 consecutive patients with de novo coronary lesions treated solely with drug-eluting stents (SES = 992; PES = 684). All patients were enrolled in a dynamic prospective registry comprising 13 hospitals. We assessed the cumulative incidence of major adverse cardiac events (MACE), defined as death, myocardial infarction (MI), and target vessel revascularization (TVR) during follow-up.
RESULTS: Overall, 29% of the patients had diabetes, 23% had prior MI, and 9% had poor left ventricular function. ST-segment elevation MI was diagnosed at admission in 12%. Multivessel intervention was performed in 16%. At 1-year follow-up, SES was associated with a reduced incidence of MACE (9.2% SES vs. 14.1% PES; p = 0.007) and TVR (5.0% SES vs. 10.0% PES; p = 0.0008) compared to PES. A propensity analysis with many clinical and angiographic variables was carried out to adjust for baseline differences. In this analysis, SES was associated with a 44% risk reduction of MACE (hazard ratio 0.56, 95% confidence interval 0.39 to 0.78) and a 55% reduction of TVR (hazard ratio 0.45, 95% confidence interval 0.29 to 0.70). This result was consistent across most subgroups tested. Similar rates of death and MI were observed in the 2 treatment groups.
CONCLUSIONS: In this large real-world population, SES improved 1-year clinical results as compared to PES.