CLINICAL COMPARATIVE STUDY ON EFFICACY AND SAFETY FOR TREATMENT OF CORONARY HEART DISEASE WITH COBALT-BASE ALLOY BIO ABSORBABLE POLYMER SIROLIMUS-ELUTING STENT AND PARTNER STENT

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Objective To evaluate the efficacy and safety for treatment of coronary heart disease with cobalt-base alloy bio absorbable polymer sirolimus-eluting stent.

Methods A total of 228 patients with up to two de novo native coronary artery lesions (reference vessel diameter, 2.5 to 4.0 mm; target lesion stenosis ≥70%; lesion length ≤40 mm) were randomised 1:1 to cobalt-base alloy bio absorbable polymer sirolimus-eluting stent (CAS) group (n=105) versus PARTNER stent group (n=123). Antiplatelet therapy consisted of aspirin (100 mg/d) and clopidogrel (75 mg/d) ≥12 months. Clinical follow-up was scheduled at 1, 3, 6, 9 and 12 months and angiographic follow-up at 6–9 months. The primary end point is in-stent late loss and in-segment late loss at 6–9 months. Secondary end point is MACE at 12 months, consisting of cardiac death, MI, or ischemia-driven target vessel revascularisation (TVR).

Results Baseline clinical and angiographic characteristics were well matched between two groups except for higher rate of hypertension and NYHA class in PARTNER stent group. Angiographic follow-up was available at 6–9 months in 175 patients (77%). Procedure was successful in all patients. 6–9 months angiographic follow-up indicated that there were no significant differences of in-stent and in-segment late loss between CAS group and PARTNER stent group ((0.34±0.30) mm vs (0.29±0.28) mm, p=0.1968, (0.32±0.34) mm vs (0.29±0.30) mm, p=0.4169). Clinical follow-up indicated that there were no significant differences of MACE at 12 months between CAS group and PARTNER stent group (5.71% vs 4.07%, p=0.5543). There were no significant differences of TVR at 12 months between CAS group and PARTNER stent group (5.71% vs 4.07%, p=0.5543). There was no cardiac death, MI and in-stent thrombosis in both of two groups during 12 months follow-up.

Conclusion Six to nine months angiographic and 1 year clinical outcome on efficacy and safety were comparable in patients implanted with cobalt-base alloy bio absorbable polymer sirolimus-eluting stents and PARTNER stents.