Abstract

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Metallic Limus-Eluting Stents Abluminally Coated with Biodegradable Polymers: Angiographic and Clinical Comparison of a Novel Ultra-Thin Sirolimus Stent Versus Biolimus Stent in the DESTINY Randomised Trial.

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Abstract

AIMS: To evaluate the outcomes of patients treated with a new drug-eluting stent formulation with low doses of sirolimus, built in an ultra-thin-strut platform coated with biodegradable abluminal coating.

METHODS: The present study is a randomised trial that tested the main hypothesis that the angiographic late lumen loss of the novel sirolimus-eluting stent is non-inferior compared to commercially available biolimus-eluting stent. A final study population comprising 170 patients with one or two de novo lesions were 2:1 randomised for sirolimus-eluting stent or the biolimus-eluting stent respectively. The primary endpoint was 9-month angiographic in-stent late lumen loss. Adverse clinical events were prospectively collected for 1 year.

RESULTS: After 9 months, the novel sirolimus-eluting stent was shown non-inferior compared with the biolimus stent for the primary endpoint (angiographic in-stent late lumen loss: 0.20 ± 0.29 mm vs. 0.15 ± 0.20 mm respectively; p value for noninferiority < 0.001). The 1-year incidence of death, myocardial infarction, repeat revascularization, and stent thrombosis remained low and not significantly different between the groups.

CONCLUSIONS: The present randomised trial demonstrates that the tested novel sirolimus-eluting stent was angiographically non-inferior in comparison with a last-generation biolimus-eluting stent.

KEYWORDS: Atherosclerosis; Coronary; Stent; drug-eluting stents

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