RESEARCH HIGHLIGHTS

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INTERVENTIONAL CARDIOLOGY

Increased risk of stent thrombosis with bioresorbable scaffolds

Bioresorbable vascular scaffolds are associated with a higher rate of device thrombosis than drug-eluting metallic stents. This finding comes from the AIDA trial, and is consistent with previous findings from the ABSORB II trial.

In the AIDA trial, investigators randomly assigned 1,845 patients undergoing percutaneous coronary intervention in routine clinical practice to receive either a everolimus-eluting bioresorbable scaffold or an everliomus-eluting metallic stent. Data were reported early owing to safety concerns of the data and safety monitoring board.

During follow-up (median 707 days), the 2-year cumulative rate of the primary end point (target-vessel failure, which was a composite of cardiac death, target-vessel myocardial infarction, or target-vessel revascularization) was not significantly different between the scaffold and metallic-stent groups (11.7% vs 10.7%; HR 1.12, 95% CI 0.85–1.48, P = 0.43). However, the 2-year cumulative rate of definite or probable device thrombosis was significantly higher with scaffolds than with metallic stents (3.5% vs 0.9%; HR 3.87, 95% CI 1.78–8.42, P<0.001).

"Given the lack of an advantage with respect to clinical efficacy, the challenges in delivering the device ... and the higher rate of device thrombosis with the bioresorbable scaffold, there is little justification for routine use of the everolimus-eluting bioresorbable scaffold over the everolimus-eluting metallic stent," writes Debabrata Mukherjee in an associated editorial. Challenges now include whether long-term dual antiplatelet therapy can protect against scaffold thrombosis, and whether manufacturers can develop new scaffolds with thinner struts composed of a material that combines higher radial strength and faster rates of reabsorption. *Gregory B. Lim*

ORIGINAL ARTICLE Wykrzykowska, J. J. et al. Bioresorbable scaffolds versus metallic stents in routine PCI. N. Engl. J. Med. http://dx.doi.org/10.1056/NEIMoa1614954 (2017) FURTHER READING Indolfi, C. et al. Bioresorbable vascular scaffolds — basic concepts and clinical outcome. Nat. Rev. Cardiol. 13, 719–729 (2016) there is little justification for routine use of the everolimuseluting bioresorbable scaffold