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CARDIOVASCULAR FLASHLIGHT

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Optical coherence tomography follow-up after bioresorbable in metallic and metallic in bioresorbable stenting: tackling in-stent restenosis in the era of bioresorbable vascular scaffolds

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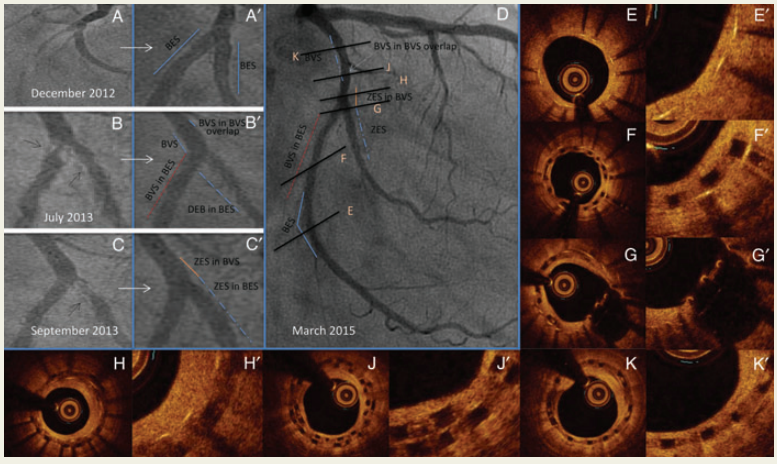

A 63-year-old woman with stable angina underwent percutaneous coronary intervention of the left circumflex coronary artery (LCX) and the first obtuse marginal branch (OM1) with biolimus-eluting stents (BES) with the V-stenting technique (*Panels A* and *A′*). Seven months later due to recurrent angina repeat coronary angiography was performed and revealed in-stent restenosis in the proximal segments of both BES. Subsequently, the OM1 lesion was dilated with a paclitaxel drug-coated balloon. The LCX stenosis was treated with an everolimus eluting bioresorbable vascular scaffold (BVS) extending into the proximal LCX segment (bioresorbable in metallic stenting) (*Panels B* and *B′*). A proximal edge dissection (Supplementary material online, *Videos—OCT*) was managed by implantation of another overlapping BVS in the proximal LCX (*Panels J*, *J′*, *K, and K′*). Three months later the patient presented with recurrent chest pain. Coronary angiography documented in-stent restenosis in the proximal OM1 (*Panel C*) that was treated by implantation of a zotarolimus-eluting stent (ZES) extending from OM1 to the proximal LCX (*Panel C′*) covering the BVS (metallic in bioresorbable stenting).

Twenty-seven months after the first intervention the patient reported atypical angina. Because of her extensive history, she was directly referred for coronary angiography, which showed all stents patent with excellent flow (*Panel D*). An optical coherence tomography was performed (Supplementary material online, *Videos*), which confirmed complete endothelialization, no restenosis, and well-expanded BVS in BES (*Panels F* and *F′*) as well as ZES in BVS (*Panels H* and *H′*).

Although these approaches need further evaluation through clinical trials, this case confirms the feasibility and efficacy of using metallic in bioresorbable and bioresorbable in metallic stenting for the treatment of in-stent restenosis with excellent endothelialization as documented by optical coherence tomography.

Supplementary material is available at *European Heart Journal* online.

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