

Migrated remnant bioresorbable scaffolds in a left main bifurcation lesion: Insights from optical coherence tomography

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A 77-year-old female patient presented with exertional chest pain. Three years before, she had undergone angiography-guided percutaneous coronary intervention (PCI) with 3.5×28 mm and 3.0×28 mm everolimus-eluting bioresorbable scaffolds (BRS; AbsorbTM; Abbott Vascular, Santa Clara, CA, USA) implanted in the proximal to distal left anterior descending artery (LAD) and a 3.0×18 mm BRS in the distal left circumflex artery (LCX) (**Suppl. Video 1**). Angiography demonstrated the patency of the implanted BRSs in the LAD and LCX, but revealed severe stenosis in the proximal LCX and vertical filling defect in the left main (LM) bifurcation lesion (Fig. 1A, **Suppl. Video 2**). Optical coherence tomography (OCT) demonstrated scaffold remnants in the LM bifurcation lesion that had migrated from the BRS implanted in the proximal LAD (Fig. 1B, C, **Suppl. Video 3**). Angiography and OCT images might correspond to a case of scaffold dismantling

when compared with the previous final angiography. PCI for the LM bifurcation lesion was planned to cover the migrated scaffold remnants because of concerns regarding embolic risk and scaffold thrombosis. The mini-crush technique with two everolimus-eluting stents (EES; Xience Sierra[®], Abbott Vascular), a 3.5×38 mm EES implanted from the LM to the LAD and another 3.5×38 mm EES implanted in the proximal LCX, was performed. After stent optimization with a kissing balloon and proximal optimization techniques, post-PCI OCT demonstrated scaffolds well-apposed by the metal struts of the EESs in the LM bifurcation area (Fig. 1D, E, **Suppl. Video 4**). The final angiography showed good distal flow without residual stenosis (Fig. 1F, **Suppl. Video 5**).

This case highlights that a superior resolution of OCT enables detection of migrated non-absorbed scaffolds over a 3-year follow-up and demonstrates scaffolds well-apposed by the implanted metal stent.

Conflict of interest: None declared

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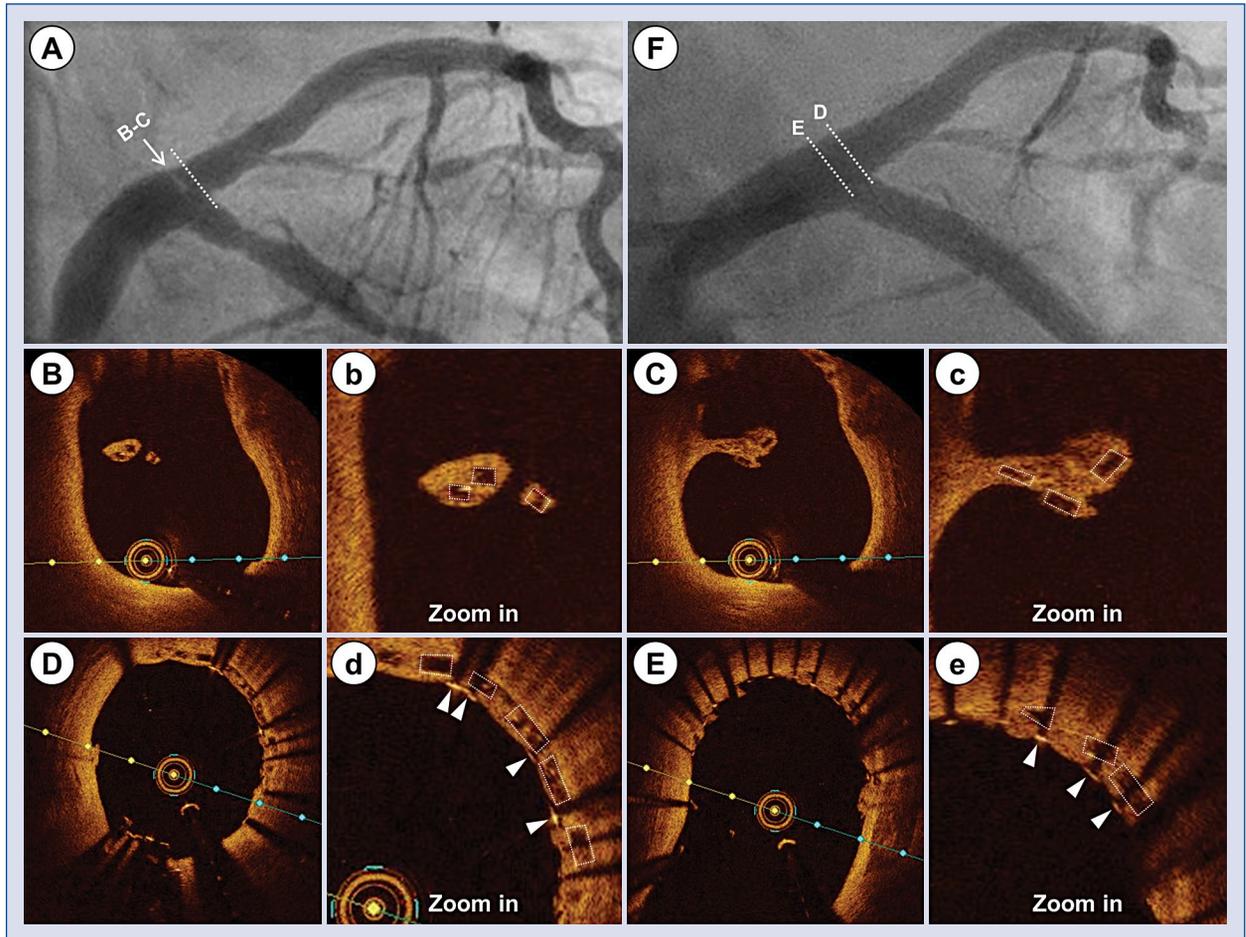


Figure 1. **A.** Angiography demonstrating vertical filling defect (white arrow) in the left main bifurcation lesion (white dotted line: proximal edge of the previously implanted bioresorbable scaffolds in the left anterior descending artery); **B, C.** Migrated remnant scaffolds (white boxes in panels **b** and **c**) in the left main bifurcation; **D, E.** Post-percutaneous coronary intervention optical coherence tomography demonstrating scaffolds well-apposed (white boxes in panels **d** and **e**) by the struts of the implanted metal stent (arrowheads in panels **d** and **e**); **F.** Final angiography demonstrating successful application of the mini-crush technique with two everolimus-eluting stents.