Case Report: Successful Bailout for an Unanticipated Optical Coherence Tomography Catheter During PCI

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[Patient] A 84-year-old man with exertional dyspnea was admitted. Coronary angiography revealed severe calcified stenosis in the left anterior descending artery. Ad hoc PCI was performed. [Procedure] Via right radial artery, a 6Fr SPB 3.5 guiding catheter was engaged. OCT revealed a severely calcified lesion (>180°, >500 μm) in the mid-LAD. After Rotational atherectomy (RA) using a 1.25 mm burr, followed by scoring balloon dilation (2.5x15 mm), stent implantation (2.5x26 mm), and post-dilation with a non-compliant ballon (2.75x15 mm). Post-procedural OCT demonstrated mild dissection at the distal stent edge, but expansion was adequate. Unexpectedly, the OCT catheter became entrapped. An additional guiding catheter was introduced via left radial artery. Although successful rewiring was achieved, no balloon could cross the point of entrapment. After removing the OCT core wire, further attempts to advance a 0.014-inch guidewire into the OCT catheter was failed. Finally, by advancing a microcatheter with an extension wire, the OCT catheter was successfully retrieved en bloc. Intravascular ultrasound (IVUS) revealed no major vessel injury; however, the stent had foreshortened to three-quarters of its original length. A retrospective review of the post-OCT images suggested that, if anything, vessel tortuosity and stent malapposition associated with severe calcification were the most plausible contributors to the OCT catheter entrapment. [Conclusion] In this case, based on the post-procedural OCT images, we had not anticipated that the OCT catheter would become entrapped. This case underscores the importance of being familiar with bailout strategies for managing imaging catheter entrapment during PCI.