

IMAGES IN INTERVENTION

Index and Follow-Up Optical Coherence Tomography Imaging Demonstrating Resolution of Post-Stent Intramural Hematoma Managed Conservatively



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A 46-year-old man presented with non-ST-segment elevation myocardial infarction (NSTEMI). Electrocardiography showed new T-wave inversion in the inferior leads. Coronary angiography demonstrated a severe lesion in the proximal right coronary artery (RCA) (Figures 1A and 1B).

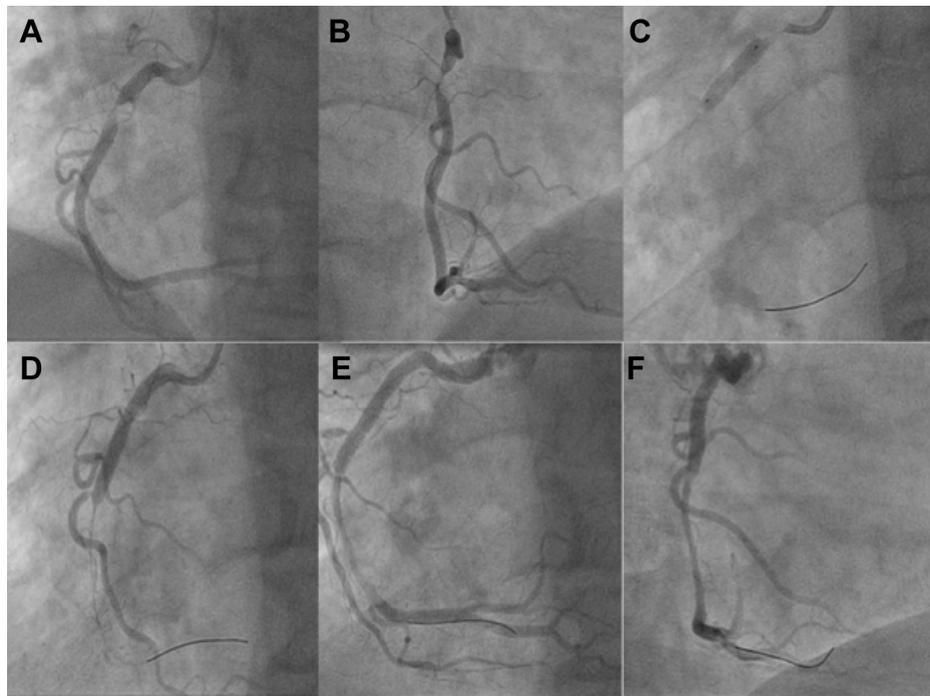


FIGURE 1 Index Procedure

Angiogram pre-stenting (A and B), per-stenting (C), immediately post-stenting (D), and by the end of the procedure (E and F), demonstrating a newer long segment of luminal narrowing with smooth edges, which improved with time.

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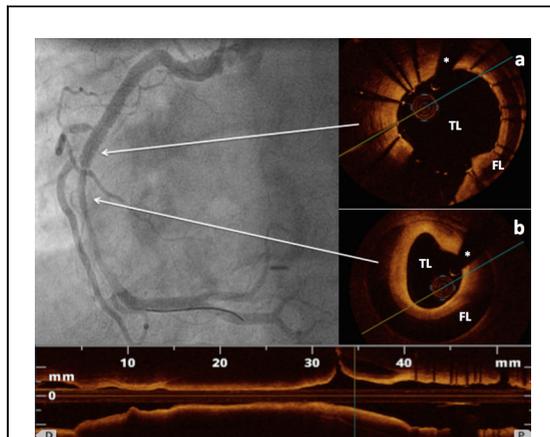


FIGURE 2 OCT Demonstrating the Lesion Pathology

Optical coherence tomography (OCT) demonstrating intima-media separation from adventia by intramural hematoma. *Indicates wire artifact. FL = false lumen; TL = true lumen.

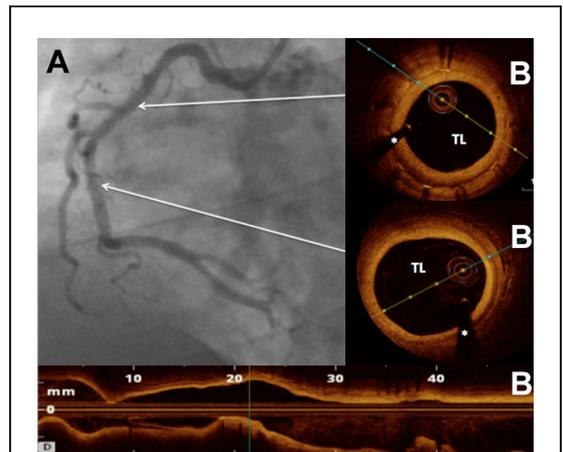


FIGURE 3 5 Weeks Post-Index Procedure

Angiogram (A) and optical coherence tomography (OCT) (B) demonstrated hematoma resorption and well-apposed stent struts. TL = true lumen.

Immediately after deployment of 4.5×16 -mm bare-metal stent (BMS), there was no-flow down the RCA (Figure 1C). The vessel just beyond the stent was dilated, and another 4.5×12 -mm BMS was deployed. Flow was re-established, but there was a residual long segment of moderate luminal narrowing with smooth edges. Angiographic suggestion of a possible intramural hematoma (IH) (Figures 1D to 1F) was confirmed by intracoronary optical coherence tomography (OCT) (Figures 2A and 2B). The patient was treated conservatively and underwent a check angiogram 5 weeks later, which demonstrated angiographic resolution (Figure 3A) confirmed by OCT (Figure 3B).

IH is defined as blood collection within the media, displacing the internal and external elastic membranes, with or without identifiable entry-exit

points (1). IH occurs more often in diabetic patients and those with less advanced coronary disease, in de novo eccentric lesions, and in the RCA. There are no existing treatment guidelines, but in a follow-up study of patients with IH, there were more NSTEMI and revascularization within 1 month in those managed conservatively, whereas more revascularization and deaths from 1 to 12 months in those treated with stenting (2). This case illustrates the course of IH with conservative treatment.

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