

IMAGES IN INTERVENTION

# Successful Percutaneous Treatment of an Acute Left Main Coronary Occlusion Due to Iatrogenic Dissection Extending Into the Ascending Aorta



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Iatrogenic coronary dissection extending to the ascending aorta is rare. The best treatment is immediate resolution by the percutaneous approach, sealing the false lumen “entry door”; however, once the dissection is produced, the true lumen may be difficult to find. We present the case of a patient with occlusive dissection of the left main coronary artery (LM) extending to the ascending aorta successfully treated by stenting at the LM ostium. Follow-up computed tomography showed complete resolution of the aortic dissection.

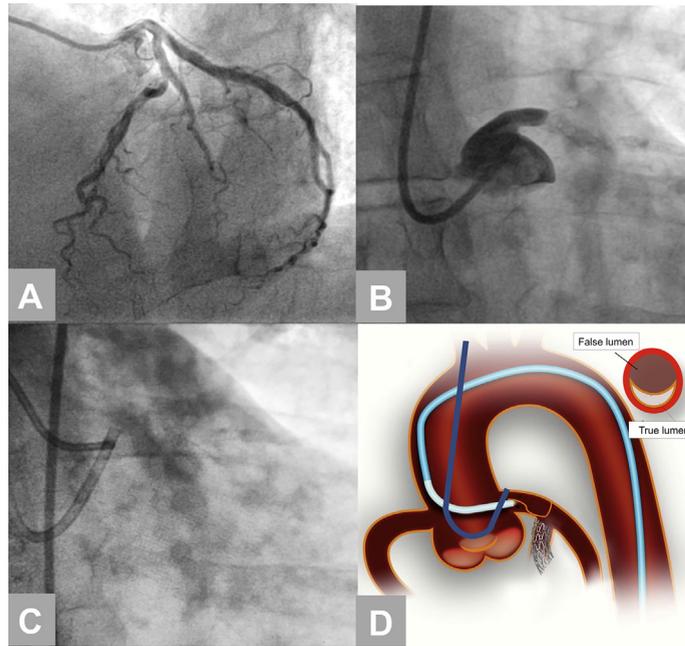
A 68-year-old patient with a history of 3-vessel coronary artery disease treated with drug-eluting stents (DES) was referred because of progressive angina. Coronary angiography performed through right radial access ruled out in-stent restenosis, showing a significant lesion at the middle left anterior descending coronary artery (Figure 1A). The LM was catheterized with a 3.5 EBU guiding catheter, with

occlusive dissection of the LM after first angiography (Figure 1B, Online Video 1). The patient experienced acute chest pain and progressive hypotension requiring vasoactive drug support. The femoral artery was canalized, and a 3.5 JL diagnostic catheter was advanced to the LM ostium, maintaining the EBU 3.5 impacted in the false lumen (Figures 1C and 1D). This maneuver allowed the advance of a wire through the true lumen, with minimal recovery of the distal flow. The LM ostium was dilated with a balloon, restoring the coronary flow (Figure 2A). A JL 3.5 guiding catheter was used through radial access and a coronary wire advanced parallel to the previous one, implanting a DES at the LM ostium, sealing the dissection and recovering distal flow (Figure 2B). The LAD stenosis was treated with an additional DES, observing the persistence of an aortic flap at the aortic sinus (Figure 2C). Intraprocedural transesophageal echocardiography ruled out aortic regurgitation,

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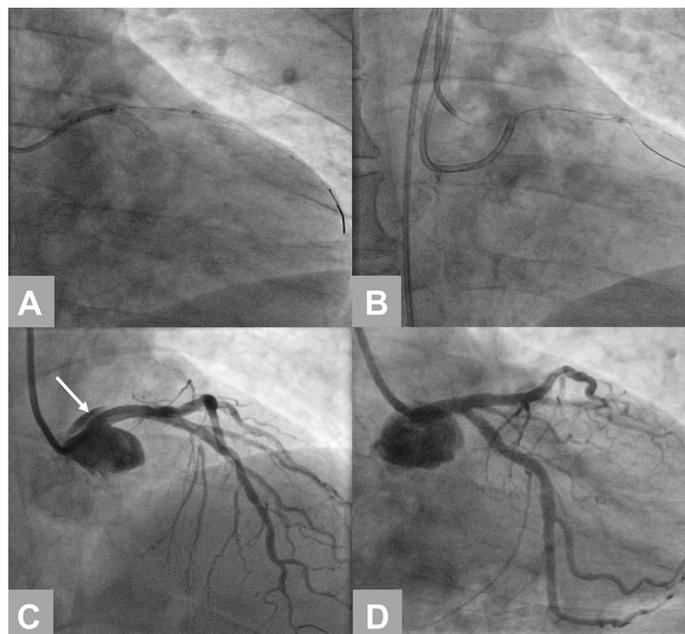
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**FIGURE 1** Left Main Coronary Artery Dissection and Percutaneous Treatment (Schema)

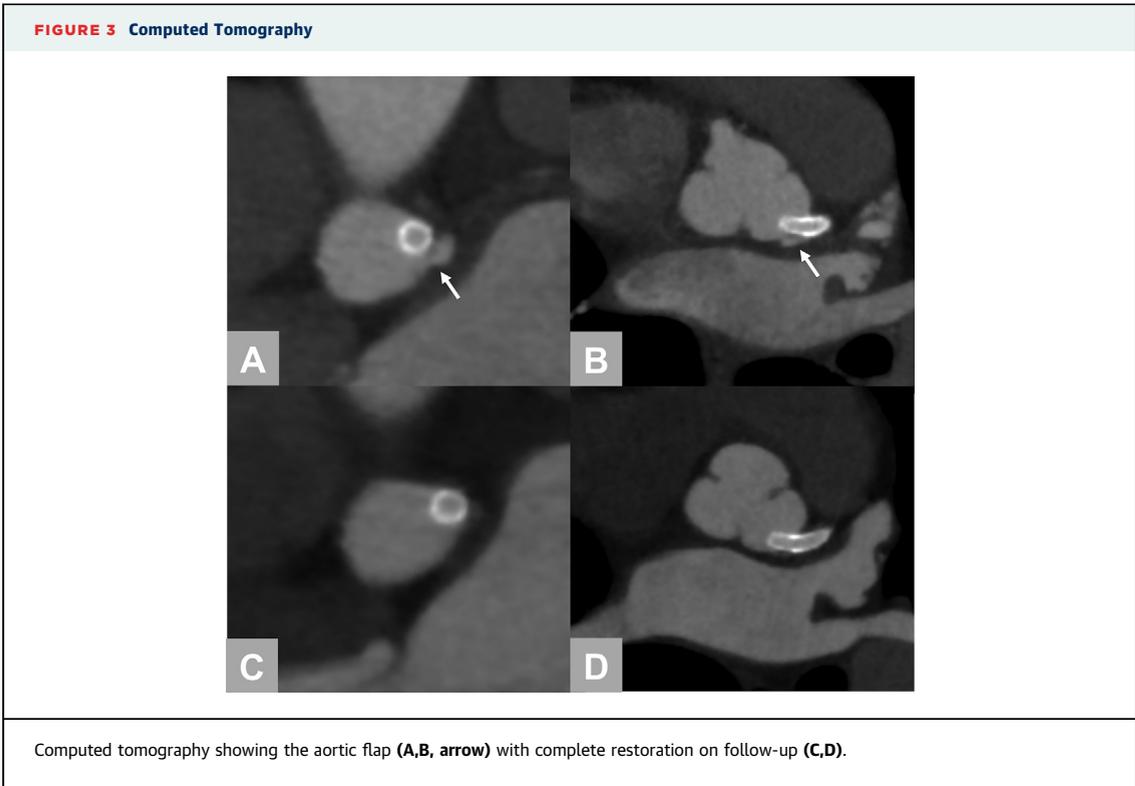


See [Online Video 1](#).

**FIGURE 2** Percutaneous Resolution of the Left Main Coronary Artery Dissection



See [Online Video 2](#).



visualizing the aortic flap. A second overlapped DES was implanted at the aorto-ostial junction, to seal the flap, with a good angiographic result (Figure 2D, Online Video 2). Computed tomography performed during admission showed the aortic flap contained by the LM stent, with complete restoration on follow-up (Figure 3).

In patients with iatrogenic coronary dissection extending into the aorta, sealing the entry door with a DES and ulterior surveillance of the dissection with computed tomography is a reasonable strategy.

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**KEY WORDS** coronary artery dissection, iatrogenic dissection of left main, left main coronary artery disease

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**APPENDIX** For supplemental videos, please see the online version of this paper.