

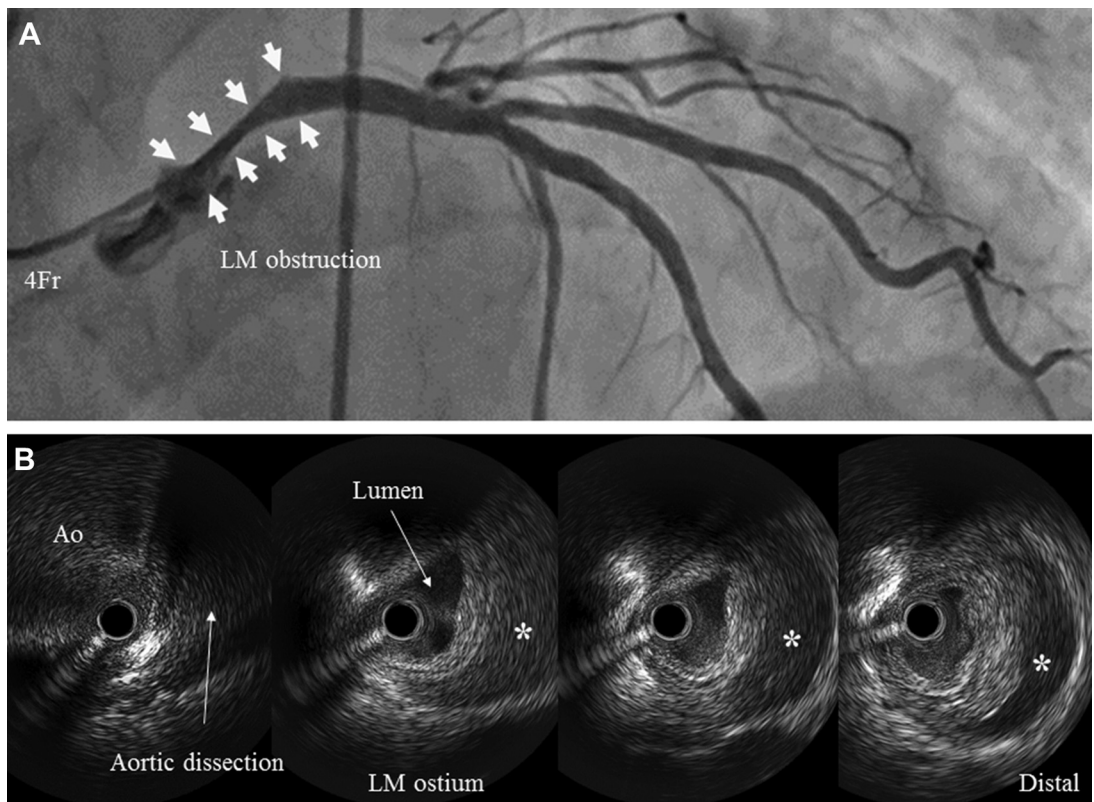
Intravascular Ultrasound-Diagnosed Acute Aortic Dissection Involving Left Main Closure



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A 72-year-old man was admitted to our hospital presenting with cardiogenic shock following chest pain. Prehospital 12-lead electrocardiography showed lead aVR ST-segment elevation with widespread ST-segment depression, suggesting acute left main (LM) obstruction. Therefore, we decided to perform coronary angiography immediately after admission for release from broad

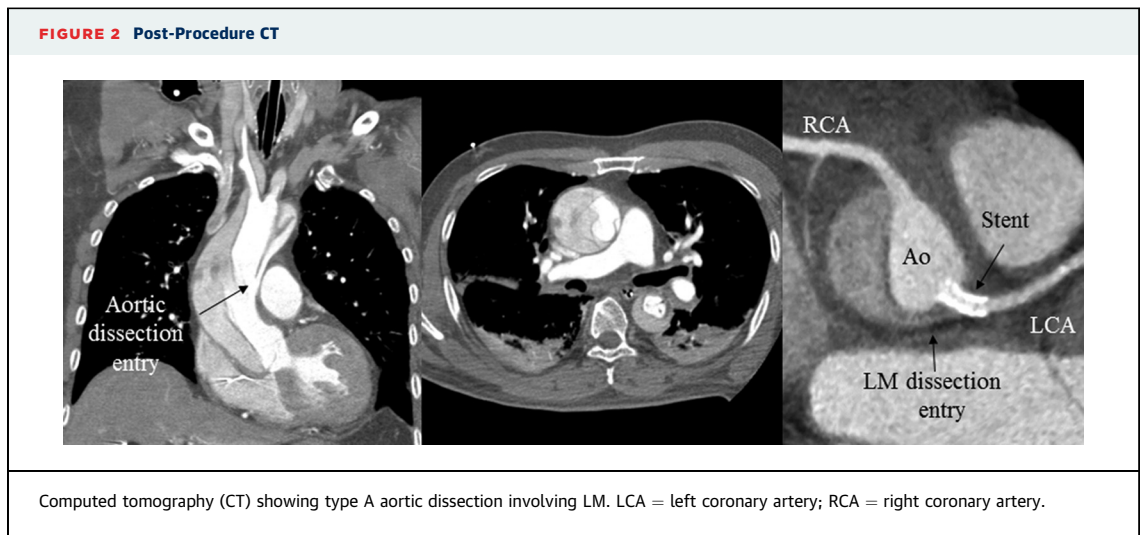
FIGURE 1 Coronary Angiography and IVUS



(A) Angiography showing severe LM obstruction (**white arrows**) ([Online Video 1](#)). **(B)** Intravascular ultrasound (IVUS) showing a dissecting hematoma (*****) in the LM which extended from the aorta (Ao) ([Online Video 2](#)).

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myocardial ischemia. Emergent coronary angiography revealed severe LM obstruction (**Figure 1A**, **Online Video 1**), consistent with electrocardiography findings. First, we performed dilatation using a 2.5-mm balloon to open the LM obstruction. After the ballooning, we did an intravascular ultrasound observation for the investigation of the cause of LM closure. Intravascular ultrasound clearly showed a dissecting hematoma in the LM which extended from the aorta (**Figure 1B**, **Online Video 2**). We thus concluded that the cause of LM closure was acute type A aortic dissection. Bailout stenting with a 4.0 × 15-mm bare metal stent to the dissected LM was needed for the bridge to the cardiac operation because re-LM closure was observed by balloon angioplasty alone. Postprocedure computed

tomography confirmed type A aortic dissection involving LM (**Figure 2**). He was transferred to another hospital for cardiac surgery. Intravascular ultrasound observation could provide us reliable information for diagnosis of life-threatening acute aortic dissection involving LM closure.

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APPENDIX For supplemental videos and their legends, please see the online version of this article.