1039 **A Case of Myocardial Hematoma Caused by Coronary Artery Perforation Successfully Treated with Right Ventricular Fenestration Using a Guidewire**

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A 93-year-old woman was emergently transported to our hospital in June 2025 due to the sudden onset of nausea, vomiting, and chills. Electrocardiography revealed atrial fibrillation and ST-segment elevation in leads I and aVL, raising suspicion for ST-elevation myocardial infarction (STEMI). Emergent coronary angiography demonstrated total occlusion of the left circumflex artery (LCx) and severe stenosis of the left anterior descending artery (LAD). Percutaneous coronary intervention (PCI) was performed. Thrombus aspiration in the LCx restored Thrombolysis in Myocardial Infarction (TIMI) grade 3 flow. Intravascular ultrasound (IVUS) revealed no evidence of plaque rupture, leading to the diagnosis of coronary embolism secondary to atrial fibrillation. Thus we decided to treat the LAD stenosis in the same session. Guidewires were advanced into both the LAD and a septal branch. A stent was deployed in the LAD, and IVUS confirmed adequate stent expansion and apposition.

However, contrast pooling was noted at the tip of the septal branch, suggested guidewire-induced vessel perforation. This intramyocardial hematoma appeared to be slowly enlarging. To prevent deterioration of cardiac function, we selected fenestration rather than coil embolization as the treatment strategy. A guidewire and microcatheter were advanced into the perforated vessel, and the wire exchanged XT-R. XT-R was navigated to the distal segment showing contrast pooling. It was then carefully advanced into the right ventricular (RV) cavity. Upon successful entry into the RV, the contrast pooling disappeared, indicating effective decompression of the hematoma. Follow-up echocardiography showed no pericardial effusion or further expansion of the myocardial hematoma. The patient remained clinically stable with no additional complications and was discharged home on hospital day 11.