

Images in  
Cardiovascular Medicine



# Acute Left Main Coronary Artery Occlusion by Embolization of Vegetation in Patient With Infective Endocarditis

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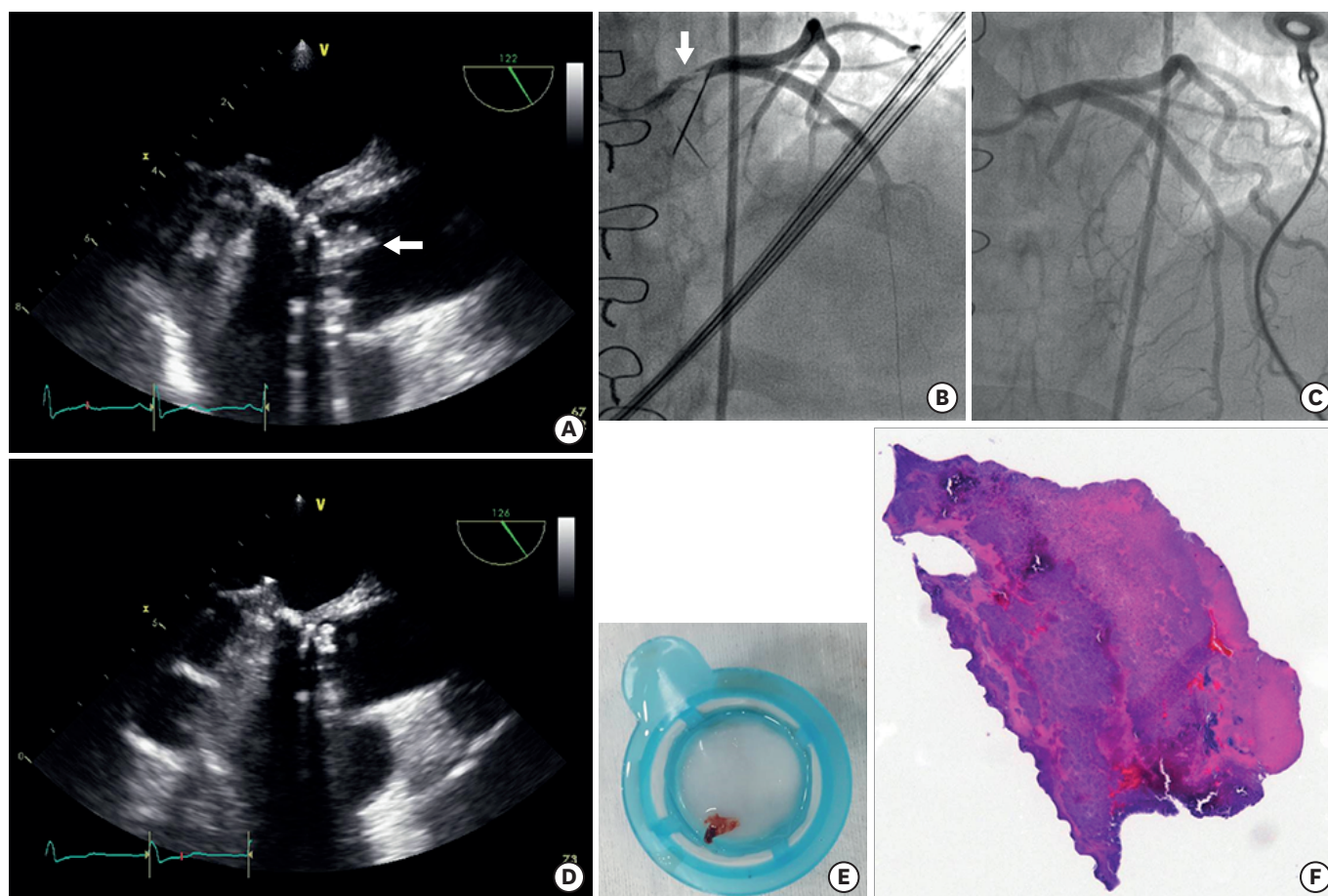
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A 54-year-old woman who had previously undergone mitral and aortic valve replacement presented with fever and chest pain. Transesophageal echocardiography (TEE) revealed mobile echogenic mass (8×5 mm) on prosthetic aortic valve (**Figure 1A**) and three sets of blood cultures grew ampicillin-sensitive *Streptococcus viridans*. She refused surgical therapy. On the 12th day of hospitalization, she complained of chest pain with ST-segment elevation in V1–V6 and fell into shock. Emergent coronary angiography (CAG) revealed filling defect in left main (LM) with total occlusion of the mid left anterior descending (LAD) artery. Cardiac arrest occurred during diagnostic CAG, so percutaneous cardiopulmonary support was performed (**Figure 1B**). Aspiration thrombectomy was performed, but LAD flow was not restored. Coronary artery stenting was performed directly at LM due to concerns about the spread of septic embolism by balloon angioplasty (**Figure 1C**). On the 15th day of penicillin use, blood cultures changed to no growth. Follow-up TEE after 3 weeks showed a decrease in the size of previous vegetation (**Figure 1D**) and the pathology result was bacterial colonies (**Figure 1E and F**). The patient's antibiotic was changed to penicillin G (4 mU IV every 4 hours) and administered for a total of 2 months. Coronary embolization in patients with infective endocarditis (IE) is rare and difficult to treat. From diagnosis of IE to acute coronary syndrome, 2 weeks is the most common delay.<sup>1)</sup> In stable patients, the surgical approach is a safer option because mycotic aneurysms may develop at the stenting site, leading to the risk of coronary rupture and sudden death.<sup>2)</sup> Although aspiration thrombectomy may be a treatment option,<sup>3)</sup> there is a risk of systemic embolism. Coronary stenting is an inevitable method and should be limited to patients with persistent ischemia or hemodynamic instability.

Written informed consent was obtained from the patient.



**Figure 1.** (A) TEE showed mobile echogenic mass (8×5 mm) on prosthetic aortic valve. (B) Emergent coronary angiography revealed filling defect in LM with total occlusion of mid LAD. (C) Direct coronary stenting (Synergy™ 3.5×12 mm) in LM was performed. (D) Follow-up TEE after 3 weeks revealed the decrease size of previous vegetation. (E) Materials from aspiration thrombectomy. (F) Bacterial colonies by pathology. LAD = left anterior descending; LM = left main; TEE = transesophageal echocardiography.

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**Data Sharing Statement**

The data generated in this study is available from the corresponding author upon reasonable request.

**Conflict of Interest**

The authors have no financial conflicts of interest.

**Author Contributions**

Conceptualization: Kim W; Investigation: Woo JS, Ki YJ; Supervision: Kim W; Writing - original draft: Kim W, Woo JS, Ki YJ; Writing - review & editing: Kim W, Woo JS, Ki YJ.

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