

IMAGES IN INTERVENTION

Infective Endocarditis Diagnosed With Aspiration Thrombectomy

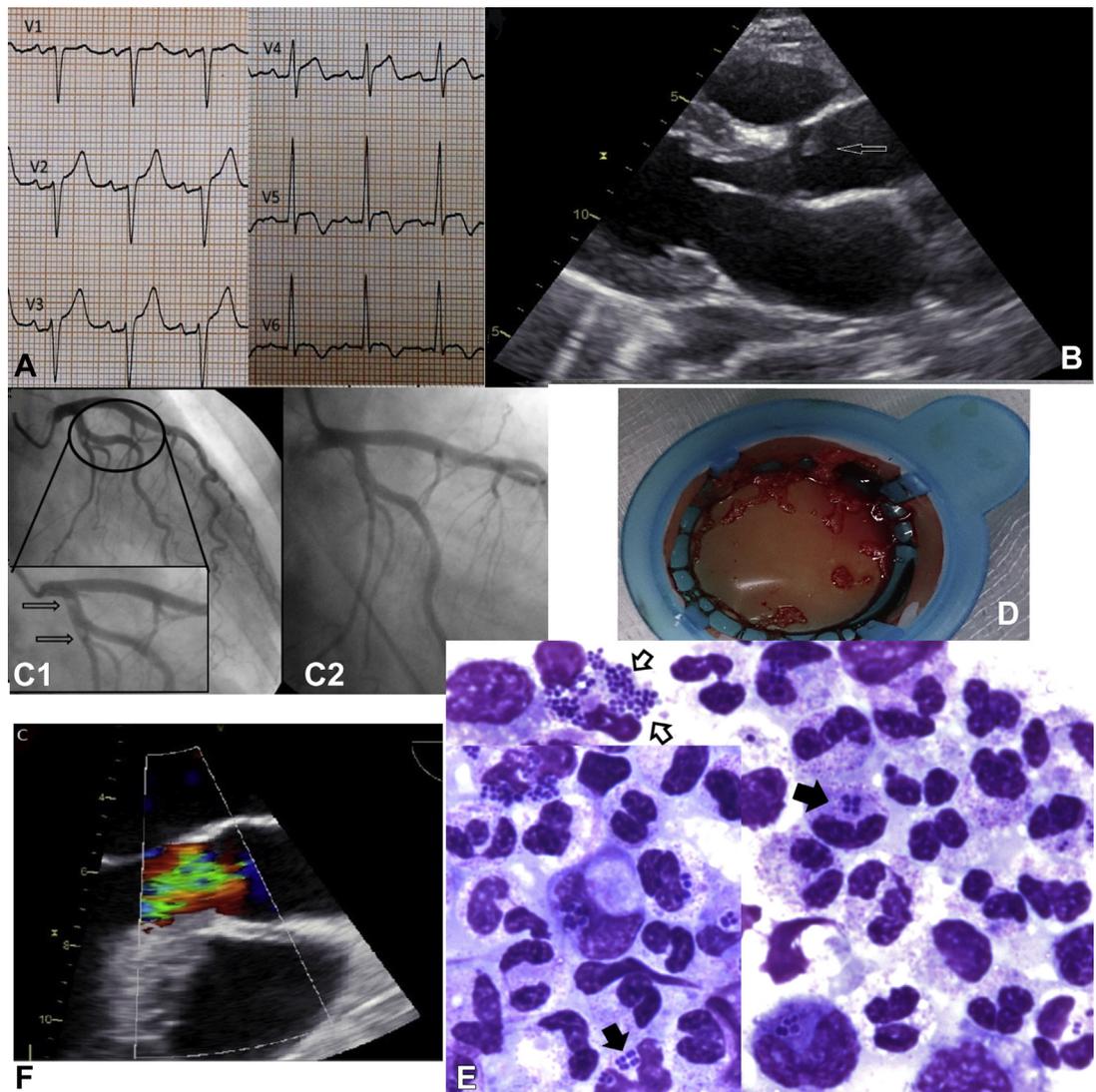


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A 55-year-old woman with ongoing myocardial infarction was referred to our hospital for coronary angiography. She had presented to her local hospital with low-grade fever that started 72 h before and then developed aphasia and anterolateral ST-segment elevation (Figure 1A). An urgent computed tomography brain scan revealed an acute left temporal ischemic stroke with petechial hemorrhage, whereas a bedside transthoracic echocardiogram revealed anterolateral wall hypokinesia of the left ventricle and a nonmobile, 10-mm mass attached to the aortic surface of the aortic valve (Figure 1B, Online Videos 1, 2, 3, and 4), with no significant aortic regurgitation. The patient underwent a coronary angiogram, which revealed a thrombus in left circumflex coronary artery (Figure 1C1, Online Video 5). We performed thrombus aspiration with a good angiographic result (Figure 1C2, Online Video 6), nevertheless, due to a high index of suspicion for endocarditis, the thrombus (Figure 1D) was sent for histopathological examination (Figure 1E). The thrombus consisted of neutrophils, extracellular cocci with appearance

typical for *Staphylococcus* (Figure 1E, open arrows), as well as neutrophils with phagocytosed *Staphylococcus* (Figure 1E, solid arrows). According to current diagnostic criteria, a definite diagnosis for infective endocarditis was made and the patient was started on antibiotics. Three days later the patient developed refractory pulmonary edema requiring intubation. A bedside transesophageal echocardiogram revealed a huge vegetation causing disruption of aortic valve with concomitant torrential regurgitation (Figure 1F, Online Video 7). The patient was referred for emergent cardiothoracic evaluation but unfortunately died before the scheduled operation. This case suggests that aspiration thrombectomy presents a rare opportunity for histopathological examination of thrombotic material, which should be always used in ambiguous cases.

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FIGURE 1 Several Characteristics Establishing a Diagnosis of Infective Endocarditis

(A) Admission electrocardiogram showing anterolateral ST-segment elevation (only precordial leads shown). (B) Transthoracic echocardiogram (parasternal long-axis view) showing the mass attached to the aortic surface of the aortic valve (**arrow**) ([Online Videos 1, 2, 3, and 4](#)). (C) Coronary angiogram showing the thrombi (**arrows**) in the circumflex coronary artery (**C1**) before and (**C2**) after aspiration ([Online Videos 5 and 6](#)). (D) Macroscopic view of the aspirant. (E) Microscopic view of the aspirant exhibiting extracellular cocci with appearance typical for *Staphylococcus* (**open arrows**), as well as neutrophils with phagocytosed *Staphylococcus* (**solid arrows**). (F) Transesophageal echocardiogram with color flow Doppler exhibiting torrential aortic regurgitation ([Online Video 7](#)).

KEY WORDS infective endocarditis, myocardial infarction thrombectomy

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