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Contrast Echocardiography with Different Probes: A New Attempt at the Follow-Up of Apical Thrombus in Loeffler Endocarditis

A 66-year-old man was admitted with exertional dyspnea and edema in the lower extremities. Both 2-dimensional transthoracic echocardiography (2D-TTE) and cardiac magnetic resonance showed obliteration of the biventricular apex with mural thrombi (Figure 1A and B). The patient refused to undergo endomyocardial biopsy. Based on the marked increased peripheral eosinophilia (2.88G/L)

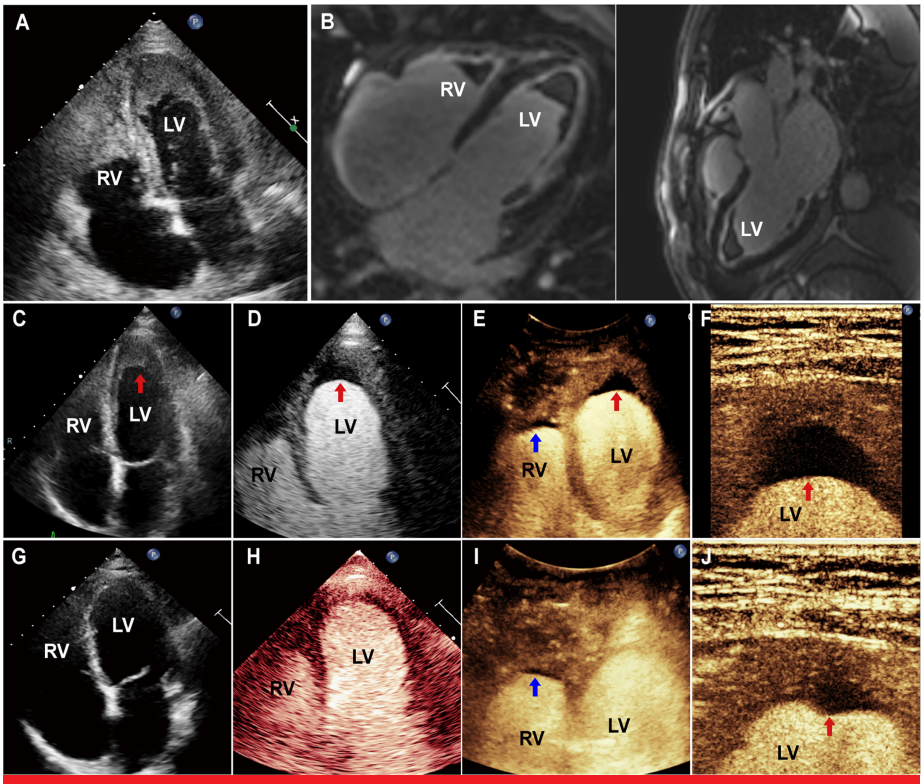

Figure 1. (A) and (B) Transthoracic echocardiography and cardiac magnetic resonance showing obliteration of the biventricular apex with mural thrombi on admission. Echocardiographic images at the 2-month follow-up: (C) 2D-TTE showing a large thrombus in the LV apex (red arrow). (D) Contrast echocardiography with the phased array probe depicting a filling defect in the LV apex (red arrow). (E) The imaging with the convex array probe reveals filling defects in biventricular apex (arrows). (F) The imaging with the linear array probe clearly shows the LV thrombus (red arrow). Echocardiographic images at the 6-month follow-up: (G) and (H) 2D-TTE and contrast echocardiography with the phased array probe showing no abnormal echogenic organized layer in biventricular apex. (I) The imaging with the convex array probe reveals a linear filling defect in the RV apex (blue arrow). (J) The imaging with the linear array probe shows a minor filling defect in the LV apex (red arrow). LV, left ventricle; TTE, transthoracic echocardiography.

E-PAGE ORIGINAL IMAGE

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and the imaging, he was diagnosed with Loeffler endocarditis (thrombotic stage). After treatment, he was discharged with the resolution of eosinophilia and improvement of symptoms.

Two months later, 2D-TTE showed that the left ventricular (LV) apical thrombus decreased in volume while the right ventricular (RV) apical thrombus seemed to disappear (Figure 1C). Therefore, contrast echocardiography was performed to ensure the absence of RV thrombus. The imaging with the phased array probe remained unclear (Figure 1D). Intriguingly, the imaging with the convex array probe revealed a filling defect in the RV apex (Figure 1E, Video 1). Furthermore, the LV thrombus was shown more clearly by using the linear array probe (Figure 1F, Video 2). The patient continued to receive drug therapy.

At 6 months, both 2D-TTE and contrast echocardiography with the phased array probe showed no abnormal echogenic organized layer (Figure 1G and H). Surprisingly, the imaging with the convex array probe and the linear array probe showed minor filling defects in RV and LV apex, respectively (Figure 1I and J), indicating that medication was still needed.

This case illustrates that contrast echocardiography with convex and linear probes adds dramatic information to detect apical thrombus in the follow-up of Loeffler endocarditis.

Informed Consent: Written informed consent was obtained from the patient.

Video 1: Contrast echocardiography with the convex array probe showing residual mural thrombi in biventricular apex at the 2-month follow-up.

Video 2: Contrast echocardiography with the linear array probe showing the LV thrombus clearly at the 2-month follow-up. LV, left ventricle.