

Figure 2. Pericardial effusion in the right anterior oblique caudal position

Informed consent: The informed consent was obtained from the patient.

Video 1. Visualization of the thebesian veins, great cardiac veins (GCV), coronary sinus (CS), and pericardial effusion.

Video 2. Left system angiography after intubation of a large thebesian vein.

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Eosinophilic myocarditis: Magnetic resonance imaging -based study of a dramatic response to steroids

A 14-year-old boy presented with a history of dyspnea on exertion for 6 months. A clinical examination and 12-lead electrocardiogram (ECG) yielded unremarkable results. 2D-ECG revealed

a large mass obliterating the left ventricular apex with tethering of the anterior mitral leaflet, moderate eccentric mitral regurgitation with moderate pulmonary arterial hypertension, and mild left ventricular dysfunction. Therefore, treatment with angiotensin converting enzyme (ACE) inhibitors, beta blockers, and low-dose diuretics was initiated. A cardiac magnetic resonance imaging (MRI) (Fig. 1a) suggested a left ventricular apical soft tissue mass with obliteration of apex. Late gadolinium enhancement (LGE) images (Fig. 1b) revealed a nonenhanced dark mass (white asterisk) overlying the bright subendocardial enhancement (white arrows) and the surrounding uniform subendocardial LGE in the apical region and papillary muscles with resultant mitral regurgitation and mild dysfunction (43%). The eosinophil count was elevated (1600 cells per mm³). Suspecting eosinophilic myocarditis, treatment with prednisolone at 1 mg/kg body weight was initiated. However, the patient was lost to follow-up for 8 months because he had symptomatically improved after taking the prescribed drugs within a few weeks. On the patient's next visit, a repeat cardiac MRI was performed to reassess the disease status, which showed a significant reduction in the soft tissue mass at the left ventricular apex (Fig. 1c). Additionally, the LGE image (Fig. 1d) showed a complete resolution of the mass with no residual LGE, suggesting a complete resolution of the inflammation.

MRI plays an important role in the workup of patients with eosinophilic myocarditis. The presence of ventricular thrombus,

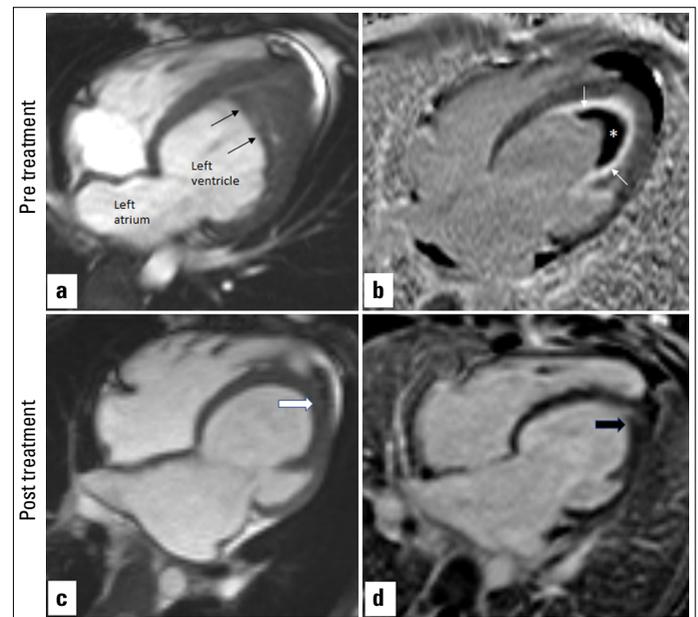


Figure 1. Cardiac MRI suggestive of left ventricular apical soft tissue mass with obliteration of apex. (b) Late gadolinium enhancement (LGE) images showing a non-enhancing dark mass (white asterisk) overlying the bright subendocardial enhancement (white arrows) and surrounding uniform subendocardial LGE in the apical region and papillary muscles with resultant mitral regurgitation and mild dysfunction (43%). (c) Repeat cardiac MRI was suggestive of significant reduction in the soft tissue mass at the left ventricular apex. (d) LGE image showed a complete resolution of the mass and no residual LGE suggesting complete resolution of the inflammation

obliteration of ventricular cavity, and degree of fibrosis can be easily evaluated using MRI. Thus, it helps in not only diagnosis but also prognosis and monitoring the response to therapy in such patients. LGE sequences are especially important in categorizing the disease into early necrotic or late fibrotic stages (1). This case highlights the dramatic response of eosinophilic myocarditis to steroids and the role of cardiac MRI in demonstrating the same.

Informed consent: Written informed consent was taken from the patient's father prior to use of these images.

Reference

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histopathology in eosinophilic endomyocarditis. *Circ Cardiovasc Imaging* 2014; 8: e002501.

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