Loeffler Endocarditis of the Left Ventricle: Cardiac Magnetic Resonance Findings

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We report the case of a 70 year-old woman of Caucasian origin. She was admitted to the emergency department for dyspnoea and hospitalised for acute pulmonary oedema.

On admission, eosinophilia was documented. Two-dimensional (2D) echocardiography displayed normal left ventricular ejection fraction (LVEF = 65%) and transmitral restrictive pattern. Cardiac magnetic resonance (CMR) cine images showed a complete obliteration of the left ventricular apex by a mass with similar density of the myocardium. This mass occupied cardiac apex and mid-ventricular area, with a hypointense zone in its inner surface (Figs. 1 and 2). Subendocardial perfusion defect (Fig. 3, left panel, arrow) and an image compatible with thrombus in the endocardial surface (Fig. 3, right panel, arrow) were evident in the first-pass perfusion imaging. In the myocardial suppression sequences, late gadolinium enhancement was heterogeneously distributed in the majority of the apical mass, respecting only the area that seemed to be thrombus (Figs. 4 and 5).

These findings strongly suggest Loeffler syndrome of the left ventricle [1-5]. Diagnosis of this uncommon disease in European countries is based on clinical data, suggestive laboratory findings (eosinophilia), echocardiography and cardiac magnetic resonance. CMR has emerged as a useful method for diagnosis and risk stratification of the disease. CMR enables the possibility of making a differential diagnosis from other cardiomyopathies such as myocardial apical tumour or apical hypertrophic cardiomyopathy. In addition, late gadolinium enhancement is particularly useful, showing the characteristic fibrous tissue, its distribution, and extension, which correlates with long-term prognosis and functional class [4].

Surgical treatment is recommended in patients that remain symptomatic despite optimal medical treatment [5]. In our patient, an initial conservative approach with medical treatment was decided by cardiologists, haematologists and cardiac surgeons. At 10 years follow-up, the patient remains clinically stable (NYHA class II), without subsequent readmissions for heart failure, and no changes in systolic or diastolic function in control echocardiography.
Fig. 3. CMR, perfusion images. Subendocardial perfusion deficit.

Fig. 4. CMR, four chamber view. Heterogeneous late gadolinium enhancement in the apical mass.

Fig. 5. CMR, dual chamber view. Heterogeneous late gadolinium enhancement in the apical mass.

Appendix A. Supplementary data
Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.hlc.2013.03.087.

References