Imaging of perimyocardial sarcoidosis during successful treatment

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A 29-year-old previously healthy man presented with progressive dyspnoea and a history of recurrent arthritic symptoms.

Transthoracic echocardiography revealed a dilated left ventricle with a global hypokinesia and thickened pericardium (Panel A; see Supplementary material online, Movie S1).

Cardiovascular magnetic resonance (CMR) showed global hypokinesia of the left and right ventricles with a predominant akinesia of the left ventricular lateral wall and marked pericardial thickening (Panel B; see Supplementary material online, Movie S2). Delayed enhancement images disclosed extensive hyperenhancement of the entire peri/epicardium and mainly in the subepicardial anterolateral myocardium (Panel C, arrows). In addition, enlarged hilar and mediastinal lymph nodes were noted. By endobronchial lymph node biopsy, the diagnosis of sarcoidosis was made. After the medication with steroids (prednisolone 1 mg/kg body), the patient improved rapidly (Panel D; see Supplementary material online, Movie S3). After 6 weeks, CMR follow-up showed an improvement of left ventricular function (Panel E; Movie IV) and a marked reduction of delayed enhancement (Panel F).

Supplementary material is available at European Heart Journal online.

Panel A. Transthoracic echocardiogram, apical four-chamber view, shows an impaired left ventricular function and a thickened pericardium (see Supplementary material online, Movie S1).

Panel B. Cardiovascular magnetic resonance (four-chamber view) demonstrates the distinct thickness of the epicardium and mainly in the subepicardial anterolateral myocardium (white arrows). Panel C. Delayed-enhanced magnetic resonance imaging reveals severe circular hyperenhancement of the entire epicardial myocardium (Panel C, arrows). In addition, enlarged hilar and mediastinal lymph nodes were noted. By endobronchial lymph node biopsy, the diagnosis of sarcoidosis was made. After the medication with steroids (prednisolone 1 mg/kg body), the patient improved rapidly (Panel D; see Supplementary material online, Movie S3). After 6 weeks, CMR follow-up showed an improvement of left ventricular function (Panel E; Movie IV) and a marked reduction of delayed enhancement (Panel F).

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