Myocarditis by mesalazine with cardiac magnetic resonance imaging

Luis García-Ferrer1*, Jordi Estornell1, and Victor Palanca2

1ERESA CT and MR Unit, Consorcio Hospital General Universitario de Valencia, Av/Tres Cruces sn, 46014 Valencia, Spain and 2Cardiology Department, Consorcio Hospital General Universitario de Valencia, Av/Tres Cruces sn, 46014 Valencia, Spain

* Corresponding author. Tel: +34 639 965 313, Fax: +34 961972175, Email: garcia.luifer@gmail.com

A 36-year-old male with Crohn’s disease on chronic treatment with mesalazine and low dosages of prednisone was admitted due to repeated syncopes. Physical examination was normal and ECG showed trifascicular block (prolonged PR, anterior haemiblock, and complete right bundle branch block). Echocardiogram showed predominately anterior and septal hypertrophy, on a medio-basal level (Panel 1, Figures A and B). Magnetic resonance imaging confirmed these findings, also revealing interatrial septal hypertrophy with a nodular formation in the lowest section (Panel 2, Figure A) and myocardial oedema (Panel 2, Figure B). After gadolinium diethylenetriamine penta-acetic acid infusion, there was a perfusion defect in the hypertrophic areas (Panel 2, Figure C) and epicardial late gadolinium enhancement in the anterior wall, and practically transmural extension in the interventricular and interatrial septum (Panel 2, Figures D–F). As myocarditis was suspected as an adverse reaction associated to treatment with mesalazine, the drug was withdrawn. Owing to persistent trifascicular block, a pacemaker was implanted. One year later, the ECG had no conduction disorders and the echocardiogram showed thinning with dyskinesia of the previously hypertrophic areas (Panel 1, Figures C and D).

Myocarditis associated with mesalazine is a rare phenomenon, although it is potentially serious. It has previously been described as a mechanism of hypersensitivity to the drug, which would make the association independent of the dose received, and which could be triggered at the start of treatment or subsequently. This is the first time in the literature that a case has been described with MRI of myocarditis due to mesalazine. MRI studies allow precise diagnoses to be given and can serve as a guide to evaluate treatment efficacy and to manage myocardial biopsies.

Panel 1 (A) Diastole and (B) systole. Echocardiogram with intracavity contrast (apical, four chambers). (C) Diastole and (D) systole. Control echocardiogram.

Panel 2 (A) Steady-state free-precession sequence, four chambers. Hypertrophy of the interventricular (thin arrow) and interatrial (thick arrow) septum. (B) Short time inversion recovery sequence. Hyperintensity of the myocardial signal with regard to the skeletal muscle. (C) Perfusion sequence, turbo-FLASH, basal short axis. Perfusion defect in the hypertrophic interventricular septum (arrow). (D–F) Myocardial suppression sequence after contrast. Epicardial late gadolinium enhancement in the medio-basal anterior wall, two chambers (D) and diffuse intramyocardial septal and in the lower interatrial wall late gadolinium enhancement, four chambers (E) and basal short axis (F).