

Paediatric acute myocarditis in a spanish reference center.

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INTRODUCTION: Acute myocarditis is a rare disease, but may have adverse outcomes in paediatric population. The gold standard diagnosis is still histological but cardiovascular magnetic resonance (CMR) has an important role as a non-invasive diagnostic tool. The aim of our study is the description of a paediatric patient's serie with acute myocarditis and the evaluation of the diagnostic and prognostic utility of non-invasive tools in this population.

METHODS: This retrospective study included all pediatric patients (0-16 years) with acute myocarditis admitted to our hospital from July 2007 to July 2015. All patients underwent an echocardiography at admittance. CMR was performed in hemodynamic stable subjects. Endomyocardial biopsy (EMB) was performed in selected cases. A clinical follow-up was performed in outpatient clinics. Adverse outcomes were defined as the composite of cardiovascular death, heart failure, or cardiac transplantation.

RESULTS: 25 patients (11 females and 14 males) were included. The median age of the population was 19 months (2.5-99.5), presenting clinically as: heart failure (44%), cardiogenic shock (40%), chest pain (12%) and arrhythmias (4%). The most common pathogen was parvovirus B19 (31.2%). 15 patients (60%) showed an impaired left ventricular dysfunction (left ventricular function < 35%) by echocardiogram and 10 of them (66.7%) had adverse outcomes, however only 3 patients (30%) with left ventricular function ≥35%, had adverse outcomes (p 0.022). CMR was performed in 17 patients, with a high correlation in terms of left ventricular function (r:0.92; p<0.001). EMB was performed in 8 patients (32%). With a median follow-up of 22 months, 52% had full recovery, 20% progressed to dilated cardiomyopathy, 16% needed transplant and 12% died.

CONCLUSIONS: Acute myocarditis is a less frequent but serious illness in paediatric age. CMR is a noninvasive test that allows us to help the diagnosis. Left ventricular dysfunction was associated with poor outcomes, however no information from CMR was significantly associated with outcomes. The use of endomyocardial biopsy is still recommended for selected cases.