Acute myocarditis in children: single center experience

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The objective of this study was to assess the outcomes of infants with acute myocarditis.

Methods: Patients <2 years diagnosed with acute myocarditis (proved by virology and/or MRI and/or complete recovery of myocardial function) were included in the study. Clinical data, echocardiographic parameters and outcomes were collected.

Results: 43 patients were included (1983 to 2012), aged 2 months to 2 years at diagnosis (median 6 months). Heart failure was present at onset in 97.6% of the cases, severe in 56% and cardiogenic shock occurred in 14.6%. LVSF at diagnosis was 16.1±5.9% and subaortic VTI was 8.1±2.9 cm. Mitral regurgitation was present in 76.5%, pericarditis in 16.4%, thromboembolic in 4.6%, arrhythmias in 14.6%. Virus was positive in 37.2%. Eight patients died (18.6%) within 2 days to 8.6 months after diagnosis, 1 was transplanted (3rd month). Follow-up is 5.5±5.6 y (med 4y). Inotrope support was needed in 52% of the cases. Three patients (7%) needed mechanical circulatory support within day-14 from onset. The duration of support was 4 d to 3 mos. Ten-year survival was 81.4%. LVSF improved from 18.4±8.9% (med 16%) at onset, to 24.6±10.3% (med 23.5%) at 1st month, 26.5±8.6% (med 26.5%) at 3rd month, 30.7±8.6% (med 29.6%) at 6th month and 38±7% (med 37%) at last FU.

Conclusion: Acute myocarditis in infants has favourable outcomes despite early mortality. Myocardial contractility can progressively improve within the first 6 months after onset of disease.