Paediatric myocarditis: new aspect from a case series

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Introduction: Our knowledge regarding the clinical characteristics of myocarditis presenting in childhood is patchy and inconclusive. Prolonged follow up created an opportunity to gather additional important knowledge regarding the nature of this rare condition. The clinical characteristics of paediatric myocarditis treated in our institute were analyzed in order to generate new knowledge about the course of the illness and possible comorbidities.

Methods: A retrospective data collection was performed to identify patients with myocarditis treated in our institute between the 1st of January 1996 and 31st of December 2010. The median follow up time was 12.71 years (range: 3.57-15.2 years).

Results: Over the 15-year span the diagnosis of myocarditis were established in eight children based on the clinical presentation. The patients’ age ranged from 3 months to 8 years. The median age was 1.16 (0.25-8.71) years. Among the primary symptoms poor feeding, lethargy were present in 7, tachypnoea in five and chest pain in one patient. On admission all had an abnormal electrocardiogram and mitral regurgitations. On echocardiography 7 patients had severe systolic dysfunction of the left ventricle and one patient had regional wall motion abnormality with pericardial effusion. Cardiac enzymes or troponin were checked in 6 patients and were positive in 5. Among the 8 patients 3 died. In the survivors the left ventricular dilatation and the ejection fraction normalized within 4-21 months. In one patient with recurrent perimyocarditis the regional wall motion abnormality disappeared within 11 and 18 days. None of the cases progressed to dilated cardiomyopathy. Myocarditis or recurrent perimyocarditis preceded the manifestation of coeliac disease in two patients. Cystic fibrosis was diagnosed in one patient after the improvement of cardiac function. Alström syndrome was diagnosed years after complete recovery from myocarditis in one patient.

Conclusions: Myocarditis may precede the manifestations of other chronic paediatric diseases. The association between coeliac disease and myocarditis is already known from the literature. No publication was found until now regarding the potential relation between cystic fibrosis or Alström syndrome and myocarditis. The results are suggesting that myocarditis may be a sentinel of non-cardiac chronic diseases based on genetic susceptibilities.