Predictors of outcomes in paediatric dilated cardiomyopathy

Belhadjer Z., Iselin F., Khraiche D., Raisky O., Bonnet D.
M3C-Necker, University Paris Descartes, Hospital Necker Enfants malades, Paris, France

Background: Dilated cardiomyopathies (DCM) is a severe disease and remains the leading cause of heart transplantation in children. Objective: To determine predictors of outcome during sequential follow-up of a cohort of pediatric DCM.

Methods: The study was retrospective (2000-2016) monocentric and included children with DCM. Clinical, biological, echocardiographic parameters and treatment information were collected throughout the follow-up.

Results: We included 110 patients. Mean follow-up was 4 years. 75% had no events during the first year of follow-up. 39% of patients died or underwent cardiac transplantation. In 27% of cases, the left ventricular function fully recovered. Predictors of events at baseline (death and transplantation) were age at diagnosis > 5 years (p=0.017), and cardiogenic shock as a presenting symptom (p = 0.04). During follow-up, hospitalization for acute cardiac failure (p <0.0001), and the need for loop diuretics during follow-up (p = 0.01) predicted events. In multivariate analysis, recurrent hospitalizations for heart failure and persistence of mitral insufficiency were risk factors of death (p=0.02 and p<0.001 respectively).

Conclusion: We identified number of hospitalizations for heart failure and persisting congestive status requiring diuretics as predictors of outcome in DCM. In addition, we identified mitral insufficiency as a strong predictor of events suggesting that progressive dilatation of the left ventricle should be considered as a risk factor for subsequent events and that reducing mitral regurgitation potentially with pulmonary banding could be considered in these patients.