**THE ROLE OF RIGHT VENTRICULAR FUNCTION IN PEDIATRIC IDIOPATHIC DILATED CARDIOMYOPATHY**

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Introduction: Prevalence of right ventricular dysfunction in idiopathic dilated cardiomyopathy is incompletely studied in children. Furthermore right ventricular function may signal worse outcomes. We evaluated recently published right ventricular function echocardiographic indices in identifying dysfunction in children with idiopathic dilated cardiomyopathy and the impact of right ventricular dysfunction on long term prognosis.

Methods: Retrospective database review of right ventricular function indices in thirty patients with idiopathic dilated cardiomyopathy were compared to sixty age and gender matched controls from January 2001 until December 2010. Right ventricular function was assessed by Doppler tissue peak systolic S’, early and late diastolic E’ and A’ waves and isovolumic acceleration at the tricuspid valve annulus; pulsed wave Doppler Tricuspid valve inflow E and A waves; right ventricle myocardial-performance-index; Tricuspid annular plane systolic excursion; right ventricle fractional-area-change.

Results: Right ventricular systolic and diastolic function in idiopathic dilated cardiomyopathy was significantly impaired. All measured indices except for isovolumic acceleration and fractional-area-change were significantly reduced with p<0.05. There was no right ventricular index predictive of death or transplantation. Patients with poor outcome were significantly more likely to need inotropic support (p = 0.018), be placed on a ventricular assist device (p = 0.005) and have a worse left ventricle ejection fraction z-score (p = 0.002).

Conclusion: Right ventricular dysfunction is under recognized in children presenting with idiopathic dilated cardiomyopathy. The need for clinical circulatory support and left ventricle ejection fraction z-score < -8 were primary determinants of outcome, independent of degree of derangement in right ventricular function.