Etiological Spectrum of Heart Failure in Pediatric Population

Eshita Bhowmik · Arun Kumar De · Sourya Mukherjee

Received: 7 August 2014 / Accepted: 21 November 2014 / Published online: 12 December 2014
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To the Editor: Heart failure (HF) is a well-recognized clinical syndrome that affects both children and adults in the entire world [1–3]. HF in adults has received considerable attention, with multiple, large randomized trials that have evaluated the etiology and therapy of this condition. In children, however, the epidemiology of heart failure is less well described, more so in our country [4, 5].

The study was undertaken at Department of Pediatric Medicine, Medical College Kolkata. All the relevant data was pooled from both inpatients and outpatients with heart failure. The study population was divided into three groups: neonate (0–1 mo), infant (1–12 mo) and >1 y. Cases were analyzed for the etiological profile in each group. Etiological profile was divided into system-based categories. Chi square analysis was utilized to compare the three groups in all categorical variables.

Our study population consisted of 390 patients, of which 210 (53.9 %) were <1 y of age and 180 (46.2 %) were >1 y of age. In neonatal (40 %) and infant group (41 %), congenital cardiac conditions were the most common associated etiology (p value >0.01). When >1 y group (11.8 %) was compared to <1 y taken together with respect to congenital cardiac conditions, p value was <0.01. In >1 y group hematological and oncological conditions were most commonly associated with heart failure, and when compared with <1 y group, p value was <0.01.

With respect to gender, heart failure is equally distributed in both sexes in all pediatric age groups. Congenital cardiac conditions were most commonly associated with heart failure in neonates. While noncardiac congenital conditions were solely found in neonatal age group. In infant age group,

congenital cardiac conditions were most commonly associated, closely followed by pulmonary diseases. In >1 y of age group hematological diseases and malignancy form more than half of associated co-morbidities with heart failure. As such, our study shows that children with heart failure who are hospitalized have different etiologies depending on age of presentation and may require significantly different facilities, management and therapeutic intervention.

Conflict of Interest None.

Source of Funding None.

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