

## **Editorial**

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# **Congenital Heart Disease - Bangladesh Perspective**

Congenital Heart Disease (CHD) is the most common congenital problem accounting for nearly 25% of all congenital malformations and is the most common type of heart disease among children<sup>1</sup>. The incidence of congenital heart disease is the rate of new cases of congenital heart disease, usually expressed as the number of babies born with congenital heart disease per 1,000 live births in a definite period. Data from the Northern Region Pediatric Cardiology database show that between 1985 to 1999 there were 5.2 cases of congenital heart disease diagnosed in infancy for every 1,000 live births<sup>2</sup>. It may present in different ages from birth to adolescent<sup>3</sup>. Most cases are asymptomatic and discovered during routine neonatal check up<sup>4</sup>. As it is the most common amongst major birth defect, place a significant economic burden and psychological impact on the affected families and treatment is costly, it is very important to find out its pattern among children. In the western countries pattern of CHD is well documented<sup>5</sup>, but it has not been studied nationwide in Bangladesh as in other western and neighboring countries. It is not a static condition, changes takes place throughout patient's life. Until 1930, it was believed that rheumatic heart disease was by far the most common form of cardiac disease in children<sup>6</sup>. In recent years it has become evident that, in most cardiac centers CHD is the more common of the two. Most cases of congenital heart disease die in early infancy and some conditions do not manifest in the first few years of life, this emphasizing the need to establish incidence and prevalence of this condition.<sup>7</sup> Prevalence rate of congenital heart disease in Bangladeshi population is not known due to insignificant population surveys. There is no incidence study in Bangladesh so far. Some study suggested that a majority of congenital heart disease in children may remain undetected unless specific efforts are made to diagnose them.<sup>3,4</sup>

Congenital Heart Disease (CHD) has already been recognized as one of the important cause of neonatal mortality and morbidity. The reported incidence of CHD in live newborns tends to vary a lot due to various unrecognizable lesions at birth and lack of technical expertise.<sup>8</sup>

A prospective hospital based study<sup>9</sup> was conducted over a period of three years (January 2006 to December 2008) in pediatric cardiology unit of Combined Military Hospital (CMH) Dhaka. All five thousand six hundred and sixty eight live birth delivered at CMH Dhaka from January 2006 to December 2008 constituted the material of the study. The incidence reported in the study is 25/1000 live births, which is much higher than any other study conducted so far.

VM Vashishtha et al<sup>10</sup> reviewed several major studies from Europe and North America and concluded that confirmed CHD incidence had been remarkably constant at 4/1000 live births over 40 years time span from 1940 to 1980.<sup>8</sup>

Another study<sup>11</sup> was conducted in Dhaka Shishu Hospital over a period of 2 years from January 2008 to December 2009 prospectively and another 2 years data was collected from hospital records from January 1998 to December 1999 retrospectively. Patients from 1st day of life to 12 years of age were included in the study. Total 539 patients were diagnosed as CHD during January 2008 to December 2009. During January 1998 to December 1999, 312 patients were diagnosed as CHD and only 11.9% were diagnosed during neonatal period. But during January 2008 to December 2009 27.5% CHD was diagnosed during neonatal period. Worldwide, VSD is the most common acyanotic CHD accounting for 25-30% of all CHD<sup>12, 13, 14, 15, 16</sup>. VSD was the commonest CHD in this study both in past and present (32.7% and 26.9%). Significant reduction in the frequency of VSD is found during January 2008 to December 2009 in comparison to January 1998 to December 1999 ( $p < 0.05$ ).

Another prospective study<sup>17</sup> was carried out over a period of one year among the admitted children in the department of paediatrics of Rajshahi medical college & hospital, age ranging from newborn to 12 years. In this study the commonest type of congenital heart disease was ventricular septal defect. This correlates with many studies<sup>18, 19, 20, 21</sup> But this differs from Rahman et al, Siddique et al and Fatema et al.<sup>20, 21, 22</sup> They found ASD the commonest lesion. This difference in observation might be due to that Rahman et al and Siddique et al included many adult patients in their study.<sup>21, 22</sup>

With the advancement of diagnostic facility and neonatal care, early detection of CHD is possible and may help to treat it at an earlier age and thus give the affected children and their parent's hope of a better future.

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