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A Clinico-epidemiological study on prevalence & spectrum of congenital heart disease in South Bengal: A cross sectional study

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Abstract: *Congenital heart disease (CHD) accounts for nearly one-third of all major congenital anomalies & also leading cause of childhood morbidity & mortality.*
We conducted a cross sectional study over a period of 6 months from March to August 2018 about the clinico-epidemiological & demographic profile of Congenital Heart Disease.
We concluded that Females are more affected than males, VSD appears to be the most common CHD followed by ASD & PDA. A large proportion of the study population is under the age of 5 years. Also in PDA, Female to male ration is 3.8:1, higher than any other CHD subtype.

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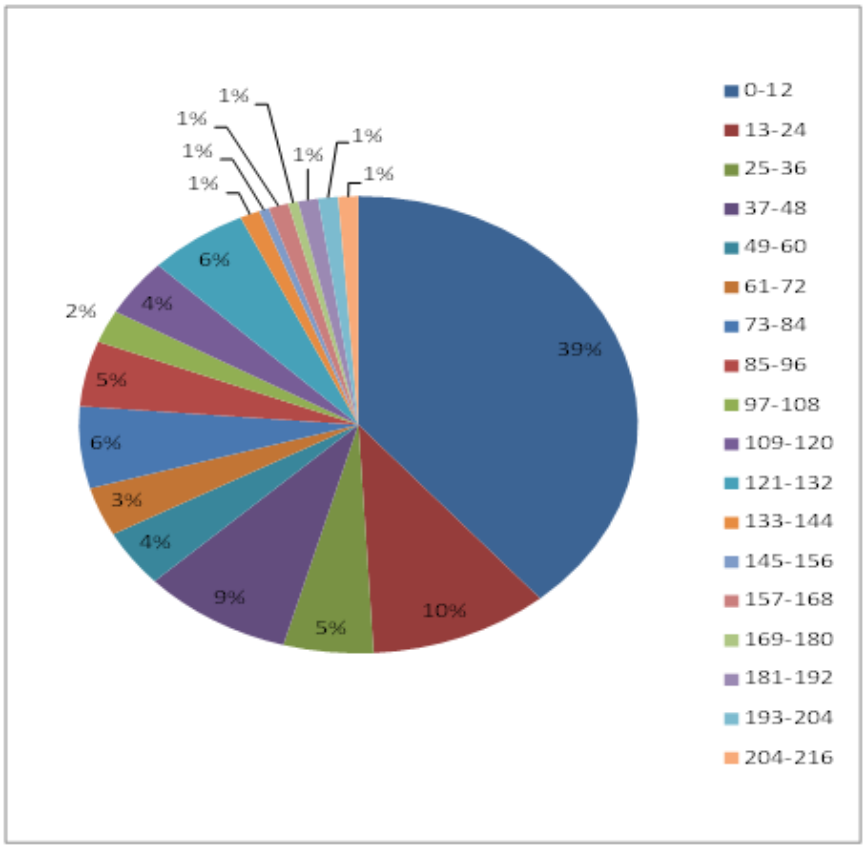
Index terms:
Congenital Heart Disease (CHD), Ventricular Septal Defect (VSD), Atrial Septal Defect (ASD), Patent Ductus Arteriosus (PDA), Double Outlet Right Ventricle (DORV), Patent Foramen Ovale (PFO), Tetralogy of Fallot (ToF), Pulmonary Stenosis (PS), Total Anomalous Pulmonary Venous Circulation (TAPVC), Mitral Valve Prolapse (MVP).

I. Introduction:

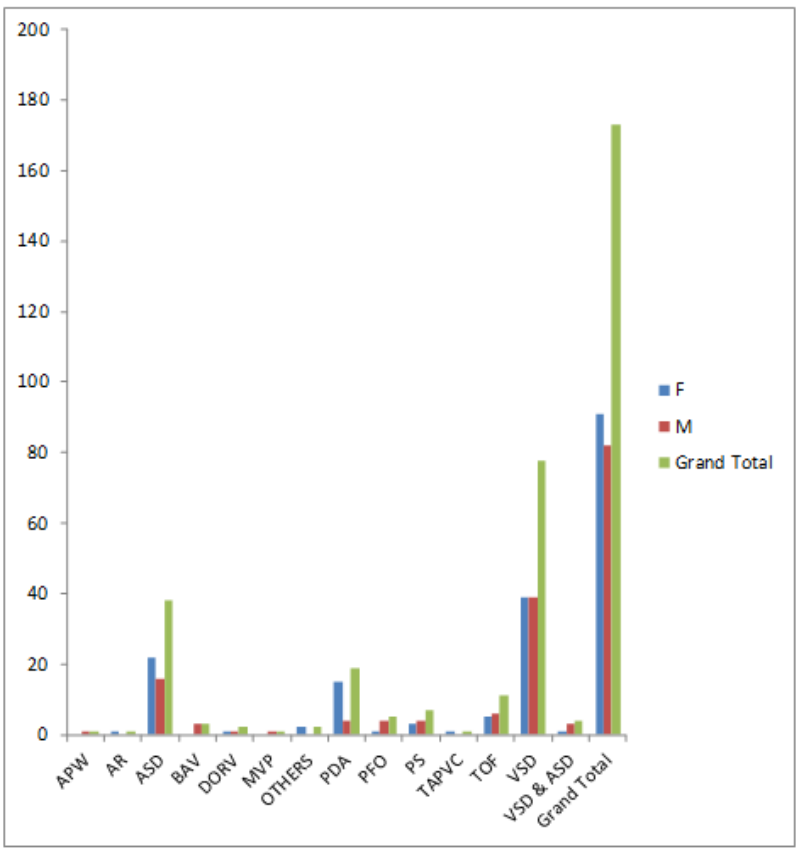
Materials & methods: Data collected from a variety of sources including OPD, clinic, laboratory; both institutional & community over a vast geographic region of South Bengal over a period of 6 months. The data were analyzed in Microsoft Excel 2010, using standard statistical methods.

II. Results & analysis:

A total of 173 patients with congenital heart disease were included in this study, age ranging from 0 to 18 years. In our study group, majority of the CHDs were found to be more prevalent among females (M:F = 1 : 1.1). Prevalence of PDA was significantly higher among females (M:F = 1 : 3.8). VSD was the most common congenital heart disease found in our study, followed by ASD & PDA. PFO comes to the list next, which has been considered here as a separate entity. Half of the patients with congenital heart diseases were below the age 2 years of age.



Pie chart shows age distribution of patients in months in the study group



Bar Graph showing frequency of various types of CHDs found in the study

	APW	AR	ASD	BAV	DORV	MVP	OTHERS	PDA	PFO	PS	TAPVC	TOF	VSD	VSD & ASD	Grand Total
F		1	22		1		2	15	1	3	1	5	39	1	91
M	1		16	3	1	1		4	4	4		6	39	3	82
Grand Total	1	1	38	3	2	1	2	19	5	7	1	11	78	4	173

Same distribution is shown in the table above.

III. Discussion:

In contrast to previous study by Khurshid et al., we have found a higher prevalence of CHDs among females. Like previous studies by Saxena et al, we also found Acyanotic CHD to be the most common, of which isolated VSD continues to top the list (45%) followed by ASD (22%) & PDA (10.6%). In PDA, higher rate of female affection correlates with previous study by Dice et al. Though the non-random nature of data collection is a limitation still it provides a good estimate of the tip of the iceberg.

IV. Conclusion:

Ventricular septal defect continues to be the major congenital heart disease. Most of the patients are under the age of 5 years. This suggests either resolution or death due to the disease leading to lesser representation of older children in the study group. This needs further study to estimate the mortality & morbidity pattern of the diseases.

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