



RESEARCH ARTICLE

SPECTRUM OF CONGENITAL HEART DISEASES IN CHILDREN IN NORTHERN
TELANGANA: A RETROSPECTIVE STUDY

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ABSTRACT

This is a case series study done at tertiary centre, Prathima Institute of Medical Sciences, Karimnagar in northern region of Telangana. Cases were diagnosed to have congenital heart disease by echocardiography performed by cardiologist. In our study of 40 patients, 40% of patients had VSD followed by ASD at 25%. Other congenital heart diseases like PDA and valvular heart disease were found to be at 11%. Tetralogy of Fallot was diagnosed in 3 patients.

INTRODUCTION

Congenital heart disease (CHD) is defined as a gross structural abnormality of the heart or intrathoracic great vessels that is actually or potentially of functional significance (Mitchell *et al.*, 1971). Large majority of these structural abnormalities of heart occur as isolated anomaly but around 33% have associated anomalies (Noonan and Ehmke, 1963). Among the congenital malformations in children, congenital heart diseases are more common accounting to nearly 25 percent. (Aburawi, 2006) Cardiac defects are grossly divided into acyanotic and cyanotic heart diseases, former being more common. Ventricular septal defect (VSD) (30-35%) and tetralogy of Fallot (TOF) (5-7%) are most common among acyanotic and cyanotic CHDs respectively (Berstein, 2007). Prevalence studies of congenital cardiac disease are necessary to establish baseline rates, to know the time, person and geographical trends that may help to raise the awareness of early medical and surgical intervention and also recommending new health policies especially in developing countries.

Aims and Objectives

The present study helps to determine the prevalence of various congenital heart disease in Northern Telangana.

MATERIALS AND METHODS

This is a hospital based study, carried out by retrospectively analyzing the data of the patients records (CHD patients) both in-patient and outpatient aged between 0-18 years coming to hospital for attending the cardiology camp at tertiary hospital, Prathima Institute Of Medical Sciences, in the months of January and February 2017. Echocardiography was performed by senior cardiologist at the institute. Written consent was obtained from parents and/or attendants from all enrolled patients following all ethical commitments.

Diagnostic criteria

1. Patients found to have CHD on echocardiography
2. Patients having documentary evidence CHD from other cardiac centres.
3. Patients having documentary evidence of having undergone corrective procedure for CHD.

Inclusion criteria

Patients aged between 0-18 years with above diagnostic criteria.

Exclusion criteria

Patients aged above 18 years.
Patients with normal echocardiography.

RESULTS

Table 1 shows results of echocardiography of 40 patients, with males being 24 (60%) and females 16 (40%). VSD has higher incidence (16/40), of 40%, followed by ASD (10/40) 25%. Tetralogy of Fallot was diagnosed in 3 patients. Other congenital heart diseases like PDA and valvular diseases were diagnosed among 11 patients.

Table 1.

	Male	Female	Total
ASD	5	5	10
VSD	10	6	16
TOF	2	1	3
OTHERS	7	4	11

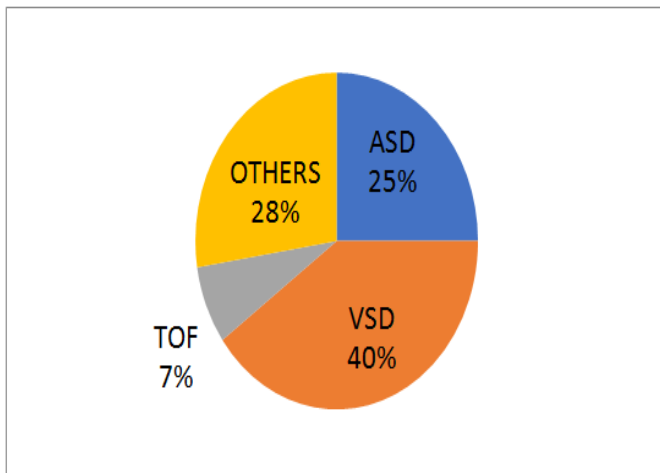


Table 2.

	Shrestha (1982)	Vashishtha (1993)	Thakur (1995)	Aiims (1996)
ASD %	23	11	38	13
VSD %	30	41	32	53
TOF %	4	14		32
OTHERS %	11	4		2
TOTAL	111	44	30	5000

DISCUSSION

Several studies have been conducted among various age groups, particularly in neonatal and paediatric population to analyse the prevalence of congenital heart diseases in many countries including India in past few decades and during this period a significant improvement in diagnosis of CHD was made by the introduction of echocardiography. Our study was limited to paediatric age group and so comprised all children up to age of 18 years, with CHD born in our hospital, referred from other hospitals, and those who attended to our hospital for the cardiology camp. The most frequent type of CHD was VSD, which is in accordance with other studies from rest of India, (Kleigman *et al.*, 2007) earlier study from the same region, (Saxena, 2005) and rest of the world. (Ashraf *et al.*, 2009; Samánek and Vorisková, 1999; Jennifer *et al.*, 2005) The frequency of the complex and rare types of CHDs was less when compared to the western data but similar to other Indian studies. (Sharma *et al.*, 1996; Pai and Varkey, 1974) Several cases may not have come to our notice as ours is not a community based study. Some cases of CHD would have escaped diagnosis like, babies delivered at home and are dead

without receiving any medical attention and those babies with mild to moderate degree of CHD, having no symptoms. The diagnosis of CHD may pass unnoticed in 30% of infants during the 1st weeks of life. (Suresh *et al.*, 1995) The magnitude of the CHD problem is largely unrecognized and underestimated. With timely intervention, medical or surgical, the prognosis and survival rates have improved in western countries. This should prompt more physicians in India to take up the challenge, it is important to determine the exact prevalence and case burden of CHD so that appropriate changes in health policies can be recommended. (Abu-Harb *et al.*, 1994)

Conclusion

From our study we could state that Ventricular septal defects is more common followed by atrial septal defects in congenital heart diseases in the northern region of telangana.

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