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ANALYSIS OF PREVALENCE OF CONGENITAL HEART DEFECT IN POPULATION OF PAKISTAN

Dr Omer Bin Naeem[1], Dr Mahnoor Furqan[1], Dr Muhammad Talha Bin Riaz[2]
[1]Ibne Sina Hospital, Multan
[2]District Headquarter Hospital, Muzaffargarh

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Abstract:
Background and objectives: *In Pakistan very, few studies have been reported regarding the prevalence, especially in the population of KPK. Hence, this study was aimed at detecting congenital heart disease in infants in population of Pakistan.* ***Methodology:*** *This descriptive cross-sectional study was conducted at Ibne Sina hospital, Multan during March 2019 to December 2019. The data was collected from 1683 infants who visited OPD for different complaints were assessed for congenital heart disease with the help of echocardiography.* ***Results:*** *From1683 infants, 303 (18%) were confirmed with congenital heart disease. Among the confirmed cases, 62.5 percent were males and 37.5 % were females. 78 % of the cases were between ages 1 to 3 months. The patients came with different presenting complaints like respiratory infection (48 %), underweight (31 %) and cyanosis (4%). Majority of cases were that of acyanotic congenital heart disease (98%). Ventricular septal defect (77.9%) was the most common congenital heart disease detected, followed by patent ductus arteriosus (PDA) 11.5%, atrioventricular septal defect (ASD)7.9 %, tetratology of Fallot (TOF) 0.9 %, aortic stenosis2%.* ***Conclusion:*** *There is an utmost need to improve the efficacy of doctors of our pediatric OPDs to be able to detect heart murmur in our infant population.*

Corresponding author:
Dr. Omer Bin Naeem,
Ibne Sina Hospital, Multan

QR code

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INTRODUCTION:

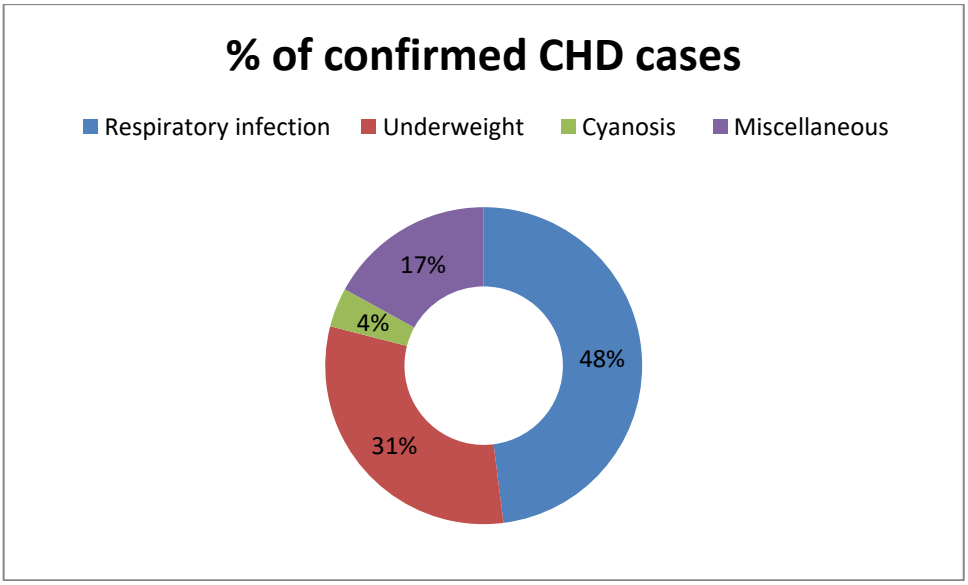
Congenital heart disease (CHD) is a heart defect with an abnormality in structure or functioning of heart that is present at birth. This condition is very common in the population of Pakistan. Worldwide, its prevalence is about 10/1000 live births.[1,2] In Pakistan very few studies have been reported regarding the prevalence, especially the population of KPK. Routine screening of heart of infants is not common in Pakistan. So, it is very difficult to calculate exact prevalence of CHD in Pakistan. In rural Pakistan the situation is reverse, where most of deliveries take place in homes by traditional birth attendants. Therefore, true prevalence of CHD in our population is unknown. Presentation of this condition can vary from asymptomatic accidental findings to severe cardiac decompensation and death. Early identification has great improvement on prognosis and can have a drastic reduction in mortality. Hence, this study was aimed at detecting congenital heart disease in the infants of the population of Pakistan.

MATERIALS AND METHODS:

This descriptive cross-sectional study was conducted at Ibne Sina hospital, Multan during March 2019 to December 2019. Cases were detected at OPD of Women and Children, which is a hospital with high inflow of pediatric patients from the city and surrounding rural areas of Multan. All infants visiting to the OPD due to any complaint would be examined for any abnormal murmur during 1-year period. Any abnormal heart sound case was referred for echocardiography for confirmation.

RESULTS:

Out of 1683 neonates that visited OPD, 303 cases (18 %) were confirmed with congenital heart disease. Among the confirmed cases, 62.5 percent were males. 78 percent of the cases were between ages 1 to 3 months. The patients came with different presenting complaints as listed below. The presenting complaint was mostly respiratory infection 48 %, underweight 31 %, cyanosis (4%). It was found that the majority (98%) of cases were that of acyanotic congenital heart disease. Ventricular septal defect was the most common congenital heart disease detected. PDA (11.6%) was the second highest in frequency, followed by ASD (7.9%), TOF (0.9%) and aortic stenosis (0.6%).



CHD	No. of cases
VSD	236
PDA	35
ASD	24
TETRATOLOGY OF FALLOT	6
AORTIC STENOSIS	2

DISCUSSION:

With improvement of technology in health sciences, early diagnosis of pediatric CHD has been possible, which has dramatically reduced the mortality rate of CHD.[3,4] But, our present study indicates that CHD usually remains undiagnosed. Most of the cases were identified during presenting complain of respiratory infection (48%). Out of 303 cases identified, 62.8% were males and 37.2% were females. The male predominance is similar to other studies done in Pakistan.[5]

Our study also revealed higher frequency (98%) of cyanotic disease as compared to acyanotic heart diseases. VSD was found to be the most common type of CHD. Similar results were shown by Rehan and Faud.[6,7] In our study, the second most common type of CHD was PDA, which was again similar to worldwide studies. Among acyanotic lesions, VSD was the most common CHD found. PDA was found second most common lesion. Similar result were shown by other studies[8, 9, 10]. This is similar with other studies in which TOF was the most common cyanotic lesion[11]

CONCLUSION:

Early diagnosis and effective management has drastic improvement on prognosis of congenital heart disease. There is a considerably higher incidence of congenital heart disease in population of Abbottabad district. Unfortunately, the defect is unidentified during the infancy or until complications develop.

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