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Research Article

ANALYSIS OF PREVALENCE OF CONGENITAL HEART DEFECT IN POPULATION OF PAKISTAN

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Abstract:

Introduction: Congenital heart disease (CHD) is a very common heart defect in the population of Pakistan. Globally, its prevalence is about 10/1000 live births. In Pakistan very few studies have been reported regarding the prevalence. Unfortunately, routine screening of heart of infants is not common in Pakistan. So it is very difficult to calculate exact pervasiveness of CHD in Pakistan.

Objectives: Hence, this study was aimed at detecting congenital heart disease in infants in population of Abbottabad district.

Methodology: This cross sectional study was conducted in DHQ Hospital Layyah during 2018 to 2019. 1683 infants who visited OPD for different complaints were assessed for congenital heart disease with the help of echocardiography.

Results: out of 1683 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 %, tetralogy of Fallot (TOF) 0.9 %, aortic stenosis 2%.

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. This can result in significant decrease in morbidity and mortality of congenital heart disease.

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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]. 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 [2]. 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 [3].

Objectives:

Hence, this study was aimed at detecting congenital heart disease in the infants of the population of Pakistan.

MATERIALS AND METHODS:

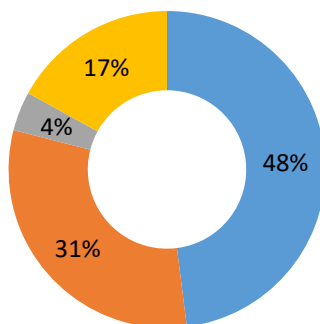
This cross sectional study was conducted in Bahawalpur Victoria Hospital during 2018 to 2019. All infants visiting to the OPD due to any complaint would be examined for any abnormal murmur during 2 year period from July 2018 to July 2019. Any abnormal heart sound case was referred for echocardiography 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%).

% of confirmed CHD cases

■ Respiratory infection ■ Underweight ■ Cyanosis ■ Miscellaneous



| 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. But, our present study indicates that CHD usually remains undiagnosed. Most of the cases were identified during presenting complain of respiratory infection (48%) [4]. 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.

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 [5]. Similar results were shown by Rehan and Faud [6]. 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. This is similar with other studies in which TOF was the most common cyanotic lesion [7, 8].

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. If detected, it can be managed in time. There is an utmost need to improve the skills of doctors of our pediatric OPDs to be able to detect heart murmur in our infant

population. This can result in significant decrease in morbidity and mortality of congenital heart disease.

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