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Research Article

**ANALYSIS OF PREVALENCE OF CONGENITAL HEART  
DEFECTS IN LOCAL POPULATION OF PAKISTAN**Dr Zaryab Jamil<sup>1</sup>, Dr Wajeaha Iqbal<sup>2</sup>, Dr Abdullah Sarwer<sup>2</sup><sup>1</sup>Benazir Bhutto Hospital, Rawalpindi, <sup>2</sup>Allama Iqbal Memorial Teaching Hospital, Sialkot

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**Abstract:**

*Congenital heart defects (CHDs) are the most common congenital malformation found in newborns, affecting approximately 6–8 per 1000 live births and are the most frequent cause of infant deaths from birth defects. The basic aim of the study was detecting congenital heart disease in the infants of the population of Pakistan. This cross sectional study was conducted in Benazir Bhutto Hospital, Rawalpindi during January 2018 to August 2018. The data were collected from 500 patients. All infants visiting to the OPD due to any complaint would be examined for this study. Any abnormal heart sound case was referred for echocardiography for confirmation. The data were collected from 200 patients. 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%). It is concluded that 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.*

**Corresponding author:****Dr Zaryab Jamil**Benazir Bhutto Hospital, Rawalpindi, E-mail:- [zaryabjamil30@gmail.com](mailto:zaryabjamil30@gmail.com)

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**INTRODUCTION:**

Congenital heart defects (CHDs) are the most common congenital malformation found in newborns, affecting approximately 6–8 per 1000 live births and are the most frequent cause of infant deaths from birth defects. Understanding the distribution of CHDs in the population is key to understanding the burden of these anomalies, including the factors influencing local case mix and severity, in order to anticipate health needs and provide effective and appropriately targeted services for the prevention and management of these conditions [1]. The observed differences in reported birth prevalence between countries may reflect causal factors, case ascertainment or the effectiveness of healthcare prevention. 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 [2]. Worldwide, its prevalence is about 10/1000 live births. 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 [3]. 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 [4]. Therefore true prevalence of CHD in our population is unknown<sup>5</sup>. Presentation of this condition can vary from asymptomatic accidental findings to severe cardiac decompensation and death<sup>6</sup>. Early identification has great improvement on prognosis and can have a drastic reduction in mortality. Various factors have been proposed as influencing the association between ethnicity and health, including biology, migration, cultural and lifestyle factors, socioeconomic

deprivation and inequitable access to health services [7].

**OBJECTIVES:**

The basic aim of the study was detecting congenital heart disease in the infants of the population of Pakistan.

**MATERIALS AND METHODS:**

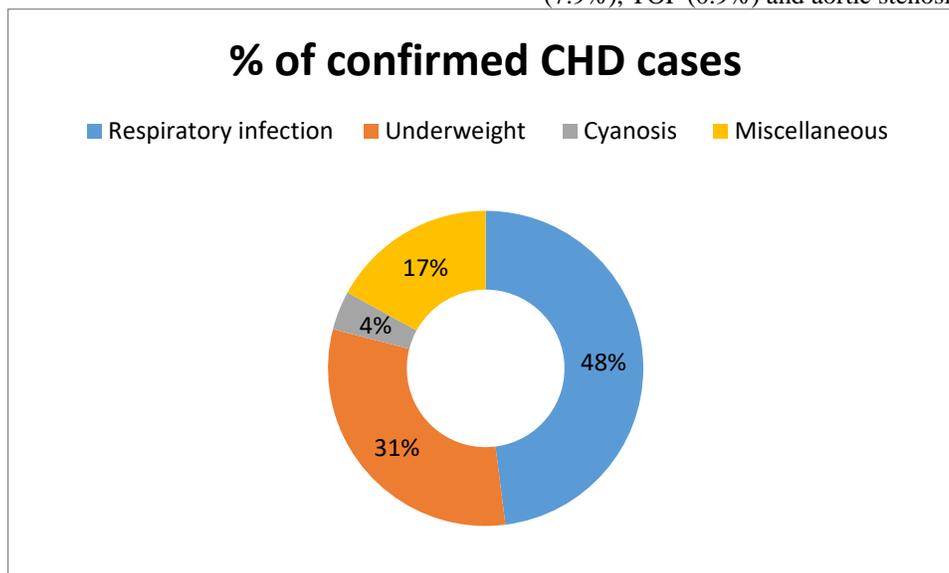
This cross sectional study was conducted in Benazir Bhutto Hospital, Rawalpindi during January 2018 to August 2018. The data was collected from 500 patients. All infants visiting to the OPD due to any complaint would be examined for this study. Any abnormal heart sound case was referred for echocardiography for confirmation.

**Statistical analysis**

Descriptive statistics are presented as numbers and percentages; 95% CIs were estimated using the binomial exact method. IRs and incidence rate ratios (IRRs) were estimated by sex and ethnic group for all CHD and each CHD subgroup.

**RESULTS:**

The data were collected from 200 patients. 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].

### CONCLUSION:

It is concluded that 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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