INTRODUCTION

Congenital heart disease is defined as abnormality at birth in structure or function of heart. They result generally from altered embryonic development of a normal structure or failure of such a structure to progress beyond an early stage of embryonic or fetal development. The aberrant pattern of flow by an anatomical defect may in turn, significantly influence the structural and functional development of the remainder of circulation. There are also certain congenital defects that are not apparent on gross inspection of heart or circulation. Examples include the electrophysiological pathway for ventricular preexcitation or interruption in the cardiac conduction system giving rise to paroxysmal supraventricular tachycardia or congenital complete heart block, respectively.

Most congenital defects are well tolerated during fetal life. Only after the elimination of maternal circulation the abnormalities becomes apparent. The infant circulation continues to change after birth and weeks, months or even years may elapse before the anomaly evolves into the typical clinical picture. Both physiologic and structural changes subsequently continue, or conversely, the malformation may 'vanish'.
The ductus in premature infant sometimes remain widely patent for months, finally closing spontaneously, leaving the baby with a normal heart. A ventricular septal defect that delivers a large left to right shunt in infancy may gradually develop progressive infundibular pulmonary stenosis, so that years later the physiologic and the clinical picture resemble classic cyanotic Fallot's tetralogy. A congenital bicuspid aortic valve that is functionally normal at birth may take two or more decades to stiffen, calcify and present as overt aortic stenosis. Thus congenital heart disease should not be viewed narrowly as a fixed ground of anatomic defects present at birth but as a dynamic group of anomalies that originates in fetal life and after during postnatal development.

On the other hand with the changes occurring in hemodynamics, there occurs changes in cardiac lesion for example as pulmonary vascular resistance falls over the first week of life, left to right shunt become more apparent. The relative significance of various defects also changes with growth as many of them become smaller later on (V.S.D.) or some become worse (Aortic or pulmonary stenosis).
The importance of congenital heart disease in pediatric cardiology can scarcely be over emphasized. Until the last three decades rheumatic heart disease was believed to be common form of cardiac disease in children. Later, it has become obvious that congenital heart disease is more common of the two. The shift of emphasis towards congenital heart disease in children is the result of spectacular advances in surgical treatment of congenital heart disease and downgrade trend of rheumatic fever.

Various surveys carried out in developed countries report incidence of congenital heart disease varying from 0.75% to 1.17% in live births (Keresbijin et al, 1966; Mithell et al, 1971; Yerunhalury, 1976; Rose et al, 1964). The incidence is high in premature and still births than in full term births. Among infants born with cardiac defects there is a spectrum of severity, about 30-35% infants with congenital heart disease will be symptomatic in the first year of life. Since palliative and corrective surgical techniques have evolved, the percentage of individuals who survive with various lesions has changed over the years, complex severe defects later in childhood now account for a large number of patients.
The pattern of anomalies is different in India than those from developed countries. V.S.D. is most common anomaly, seen in USA & Canada, while studies from U.K. & Europe show A.S.D. & P.D.A. to be more common lesion. The different figures obtained depending on whether one discusses living patients or results of post mortem examinations, in addition each author's series in terms of age or type of disease.

In toto, children with congenital heart disease are predominantly male. Moreover, specific defect may show a definitive sex predominance. PDA & ASD are more common in females, whereas valvular aortic stenosis, congenital aneurysm of sinus of valsalva, coarctation of aorta, tetralogy of Fallot's & T.C.A. are more common in males.

The etiology of congenital heart disease is unknown in most instances. A multifactorial inheritance hypothesis is gaining increasing acceptance, rarely single gene syndromes, gross chromosomal abnormalities may found to be responsible (3% and 5% cases respectively). In most instances there is a combination of genetic and environmental influences.
In 2% cases environmental factors and in 90% cases environmental factors with associated genetic factors are responsible for causation of disease.

Extracardiac anomalies occur in approximately 25% of infants with significant cardiac disease, one third of them have some established syndromes as Turner Noonan's, Leopold, Holt-oream, Ellis-van-crevard, Kertagooner, Laurence - Moon-Biedl, Marfan syndrome etc.

There is approximately a 1% incidence of congenital heart disease in normal population and this incidence increases to 2-6% for a second pregnancy following the birth of child with congenital heart disease, depending on type of lesion in the first child. When two siblings have the disease, the risk for third affected child may increase to 20-30%. The incidence figures for infants born to mother, who have congenital heart disease are similar to those for sibling. Thus parents having affected child require counselling regarding the incidence of cardiac malformation in subsequent children.

The diagnosis of congenital heart disease can be made clinically, but electrocardiogram and xriogram of chest are necessary to support the clinical diagnosis. By the advent of echocardiography, various anatomical details can be made out without any invasive procedure.
Thus, by seeing the incidence of congenital heart disease in different parts of the world, it is obvious that this problem is quiet big and must be involving a significant number of children in Bundelkhand area. As no study has been made in this field, so far, in this area, present study was planned to work over the congenital heart disease in this area with following aims and objectives:

1. To find out the prevalence of congenital heart disease in Bundelkhand region.

2. To study the various types of congenital heart diseases and their incidences.

3. To find out the sex incidence of various congenital heart diseases.

4. To see association of congenital heart disease with other congenital defects.

5. To see the development delay in infants with congenital heart disease.

6. To see for the complications of disease in infants with congenital heart disease.

7. To see incidence of congenital heart patients probably affected by environmental factors, like diseases, medication or overexposure of radiation in mothers of affected children during gestation.