

Types of Congenital Anomalies among Children at Bint Al-Huda Teaching Hospital in Al-Nasiriyah City, South of Iraq

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ABSTRACT

Background: The occurrence of congenital anomalies remains an important public health issue. The goal of the study is to find out what kinds of congenital defects children at the Bint-AL Huda teaching hospital in Nasiriyah.

Method: A descriptive study design was adopted to fulfill the objectives of this study which is conducted in the period between (23th of August to 25th of November, 2021). The sample of the study was included one hundred convenient children with congenital anomalies. The questionnaire administered by the investigator was used to obtain information about the congenital anomalies types. The data analysis by SPSS version 25.

Results: Show socio-demographic characteristics of child percentage distribution, (30%) of child age was in neonate stage, (29%) was the second baby and percentage of male and female (58%,42%) respectively and the period between previous and present child (59%) more than 24 months. Regarding types of congenital anomalies, the result shows the high incidence congenital anomaly in cardiovascular system (34%) and then in digestive system (31%).

Conclusions: According to the results of the study, congenital anomalies are more in males than females

Recommendations: Encourage mothers to undergo prenatal screening and early discovery of congenital defects, which can lead to life-saving interventions and the prevention of some physical, sensory, and intellectual problems.†

Keywords: Congenital anomalies, Socio-demographic, Prenatal screening, Intellectual problems

INTRODUCTION

In many nations, congenital abnormalities are major causes of childhood mortality, chronic disease, and disability. Birth defects, congenital diseases, and congenital malformations are all names for congenital abnormalities¹. A congenital anomaly is a physiological, biochemical, or architectural deviation from the usual growth pattern that is obvious at birth or recognized during the first year of life, and it has emerged as the primary cause of maternal and infant mortality^{2,3}.

Single-system or multiple-system abnormalities are the most common types of genetic anomalies. The first affects a single major organs or body part, while the second affects a large number of organ systems or body parts⁴.

According to the World Health Organization Fact Sheet on Causes of Child Death in 2002-2013, every year around 234,500 children dies within four weeks of birth worldwide due to congenital anomalies⁵.

Congenital abnormalities are increasing enormously as one of the major problems worldwide, while other causes of infant death, such as nutritional deficits and infections, are being addressed^{6,7}. Congenital abnormalities are becoming more common as a result of several types of teratogen exposure⁸.

Internal or external abnormalities in the function and structure of systems that emerge during the fetal period and are evident at delivery, independent of the reason or the time of diagnosis⁹.

Congenital abnormalities are classified into four categories: genetic, environmental, mixed, and unknown. Up to 10-30% of all congenital abnormalities are thought to be caused by genetic factors, with environmental variables accounting for 5-10%, multifactorial heredity accounting for 20-35 percent, and unknown reasons accounting for 30-45 percent of cases¹⁰.

Early diagnosis of birth abnormalities includes screening before pregnancy to identify adults who are at risk of acquiring specific disorders or passing one on to their children, according to the World Health Organization. Screening for advanced maternal age, macaque blood group compatibility, and transmitter screening are all part of prenatal screening. Clinical examination as well as blood, metabolism, and hormonal problems are all part of the newborn assessment¹¹.

METHODOLOGY

Design of the Study: "A descriptive study design" (Quantitative research) was chosen to fulfill the objective study which was conducted carried out at the pediatric ward of Bint- AL Huda teaching in Al-Nasiriyah city to identify types of congenital anomalies among children from (23th of August, 2021 to 25th of November 2021).

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Sample of the Study: The sample of the study was included one hundred children with any type of congenital anomalies admitted to the hospital (convenient sample).

Study Tool: The questionnaire was created and compiled by the investigators after they reviewed relevant literature and books on the study's issue. The questionnaire is divided into two sections: The first section is about the child's social and demographic data, and it comprises five questions regarding the enrolled child's data, such as age, gender, order of the child in the family and the period between the former child and the one participating in the study and second part included questions about the type of congenital anomalies.

Data Collection: The data were collected from the selected hospital in Al-Nasiriyah city. The study connected at the pediatric medical ward that available in the Bint-AL Huda teaching at the period from (23th of August, 2021 to 25th of November, 2021). The data analysis by spss version 25¹².

RESULTS

Table 1: Socio-demographic Characteristics of the children (N=100)

| Item † | Frequency | Percentage |
|---|-----------|------------|
| Age | | |
| Newborns | 30 | 30% |
| 1-12month- | 22 | 22% |
| 1-3years | 24 | 24% |
| 3-6 years | 17 | 17% |
| 6-12 years | 7 | 7% |
| Gender | | |
| Male | 58 | 58% |
| Female | 42 | 42% |
| Child order: | | |
| First | 14 | 14% |
| Second | 29 | 29% |
| Third | 19 | 19% |
| Forth | 11 | 11% |
| Fifth | 27 | 27% |
| The period between pervious and present child: | | |
| None | 9 | 9% |
| 12month or less than | 10 | 10% |
| 13-24 month | 22 | 21% |
| More than 24 month | 59 | 59% |

Table 2: Distribution of congenital anomalies by types of anomaly (N=100)

| Total | Percentage | Frequency | Types of congenital |
|---------------------------------|------------|-----------|---------------------------|
| Digestive system: | | | |
| | 12% | 12 | Cleft lip |
| | 6% | 6 | Anorectal anomalies |
| 31% | 7% | 7 | Intestine atresia |
| | 5% | 5 | Esophagus atresia |
| | 1% | 1 | Ankyloglossia |
| Chromosomal abnormality: | | | |
| 7% | 7% | 7 | Down syndrome |
| Urinary system: | | | |
| | 2% | 2 | Renal pelvis malformation |
| 6% | 1% | 1 | Ureter atresia |
| | 1% | 1 | Urethra atresia |
| | 1% | 1 | Exstrophy |
| | 1% | 1 | Ectopic ureter |
| Neurological system: | | | |
| | 6% | 6 | Hydrocephalus |
| | 1% | 1 | Bell's palsy |
| 14% | 4% | 4 | Spina bifida |
| | 2% | 2 | Ancephaly |
| | 1% | 1 | Acrania |

| Musculoskeletal system: | | | |
|--------------------------------|-----|----|----------------------------------|
| | 1% | 1 | Joint absent |
| | 1% | 1 | Bony thorax anomalies |
| | 2% | 2 | Finger anomalies |
| 8% | 1% | 1 | Diaphragm hernia |
| | 3% | 3 | Inguinal hernia |
| Cardiovascular system: | | | |
| | 17% | 17 | Ventricular septal defect |
| | 9% | 9 | Atrial septal defect |
| | 2% | 2 | Tetralogy of fallot |
| 34% | 1% | 1 | cardiomyopathy |
| | 2% | 2 | Aorta atresia and bicuspid valve |
| | 2% | 2 | Pulmonary dilated artery |
| | 1% | 1 | Mitral valve prolapse |

DISCUSSION

This study was aim to identify types of congenital anomalies among children at Bint- AL Huda teaching in Al-Nasiriyah city Iraq. In this study, the male is more affected with congenital anomalies than females (58%). (Table 1) shows that the majority of residents were male, which is comparable to the findings of (Younis et al., 2021; Ahmed et al., 2020) who found males to be the majority of participants in the current study^{13,14}. According to the demographic variables, the bulk of the participants in study¹⁵ were female. This result agrees with (Arushiv et al 2017; Ahmed et al 2020 and Younis et. al, 2020) they found about (60%) of samples with congenital anomalies were affected, males. Regarding the type of congenital anomalies (Table 2), the most common anomaly was a cardiovascular system which is consistent 34% from total samples¹⁶⁻¹⁸. Ventricular septal defect was reported as the most commonly system affected region (17%). This result agrees with Taksande et al that found cardiovascular malformations were most common types of congenital. The second common anomaly was a digestive system (31%) followed by 14% neurological system¹⁹.

CONCLUSION

In this study we found that cardiovascular system and digestive system anomalies are very common among children and females less affected by congenital anomalies than males. †

RECOMMENDATIONS

The need new studies to identified the prevalence of congenital abnormalities among children in Al-Nasiriya city and investigate the reasons for these anomalies. †

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Competing Interest: None.

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