

## Frequency of Congenital Structural Anomalies in Newborns of Shahroud, Iran

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## Introduction

Congenital disorders are developmental errors of birth and are the main reason of infant mortality and important cause of morbidity and mortality in the first year of life [1]. Since the frequency of neonatal malformations has been studied in different cities of Iran and not performed yet in Shahroud, the researchers decided to evaluate the frequency of these disorders in this city.

This research is a descriptive cross-sectional study that was performed retrospectively through a review of all files of mothers who were delivered in Fatemeh hospital during last 7 years (2001-2007).

Sampling method was census. Cases of structural disorders (based on reference books classification) and self-made checklist with regard to pediatricians were the record criteria of anomalies. After collecting data, the results were obtained from SPSS-16 software and the test of mean and percentage.

In total 20,751 files were studied and 220 abnormal newborns were detected. The frequency was 1.06 per 100 births. Anomalies of musculoskeletal system and clubfoot had the highest frequency of 28.2% followed by genitourinary system, nervous system, and cardiopulmonary system disorders with frequencies of 21.8, 11.8, and 1.3%, respectively.

The study showed the frequency of abnormalities as 1.06 in every 100 births; in other cities such as Hamadan it was 2.8% in 1999 [2], and 1.17 cases in every 10,000 dead and alive births in 2001-2005 in Urmia [3]. Clubfoot (15.8%) was the most common musculoskeletal anomaly and more common in boys than girls (11.5% vs. 9.5%). Polydactyly (10%) and varus and valgus consisted 1.3% of all abnormal cases. 18.6% (43 persons) of boys and 1.7% (4 persons) of girls had urogenital malformations.

Hypospadias (8.6%) was the most abundant anomaly of the genitourinary system. Hydrocephalus (5.2%) was the most common anomaly of the nervous system followed by meningocele (3%), hydrocele and myelomeningocele (2.1%), anencephalus (0.9%). In this study the main face anomaly was cleft lip and palate and the former was more.

It seems that the rate of evident anomaly in this region is not more than other cities. Our study was retrospective and we were unable to study the demographic and genetic factors, so it is recommended to perform more studies in this field.

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