



Obstetrics & Gynaecology

PREVALENCE OF CONGENITAL ANOMALIES IN URBAN PREGNANT FEMALES: A RECORD-BASED STUDY FROM BHOPAL

Dr. Balaji Panditrao Nalwad

Associate professor, Department of Obstetrics & Gynaecology, People's College of Medical Sciences and Research Bhopal, MP

Dr. Anant Arunrao Takalkar *

Professor, Department of Community Medicine, MIMSR Medical College, Latur, Maharashtra*Corresponding Author

ABSTRACT

Congenital malformations occur in 2-4% of all births. Despite their relatively low prevalence, fetal malformations are responsible for approximately 30% of perinatal deaths in addition to considerable infant morbidity in developed countries. Prenatal diagnosis of congenital disease provides information for decisions during pregnancy and appropriate treatment perinatally (timed delivery in tertiary care centres) and it is assumed to improve perinatal and long-term outcome. However, this assumption has been demonstrated only for few specific subsets of malformations, and with conflicting results. Objectives: To find out prevalence and spectrum of Congenital Anomalies. **Methodology:** The present retrospective record-based study was carried out at Department of OBGY including 100 Pregnant women with high risk for congenital anomalies. **Results:** Prevalence of congenital anomaly in our study was 4%. Prevalence according to type of anomaly revealed Cleft Lip and palate (1%), fetal PDA (1%), Down's Syndrome (1%) and Pyloric Stenosis with epidermolysis bullosa (1%). Age wise prevalence of anomaly revealed that Cleft Lip & palate was found in 36-40 years age group. Down's Syndrome was found in 31-35 years age group. Fetal PDA and Pyloric Stenosis with epidermolysis Bullosa in 20-25 years age. **Conclusion:** Prevalence of congenital anomaly in our study was 4%. We observed Cleft Lip and palate (1%), fetal PDA (1%), Down's Syndrome (1%) and Pyloric Stenosis with epidermolysis bullosa (1%).

KEYWORDS : Congenital anomaly, high risk mothers

Introduction

Congenital malformations occur in 2-4% of all births. Despite their relatively low prevalence, fetal malformations are responsible for approximately 30% of perinatal deaths in addition to considerable infant morbidity in developed countries.¹ Prenatal diagnosis of congenital disease provides information for decisions during pregnancy and appropriate treatment perinatally (timed delivery in tertiary care centres) and it is assumed to improve perinatal and long-term outcome. However, this assumption has been demonstrated only for few specific subsets of malformations, and with conflicting results.^{2,3}

A major impact of antenatal diagnosis of malformations is related to the severity of the malformations detected. Most severe defects are reportedly detected earlier than minor ones, which is especially relevant in many countries where only before viability is termination of pregnancy authorized by law.⁴ The gestational age at which a severe malformation is diagnosed is therefore crucial to further management of the pregnancy. A recent meta-analysis assessing the use of routine ultrasound compared to selective ultrasound before 24 weeks gestation has shown that where detection of fetal abnormality was a specific aim of the ultrasonographic examination, earlier detection of clinically unsuspected fetal malformation occurred. As a result, an increased rate of pregnancy termination was recorded in study groups undergoing ultrasound screening (odds ratio 3.19; CI 1.54- 6.6).⁵ The impact of the high pregnancy termination rate is a decrease in prevalence of livebirths affected with severe malformations, of the order of 20%-30%.⁶

So, with this background the present study was conducted among high-risk antenatal women for congenital malformations.

Objectives: To find out prevalence of Congenital Anomalies

Materials and Methods

Study setting: Department of OBGY

Study population: All Pregnant women with high risk for congenital anomalies

Study period: January to December 2022

Sampling design: Retrospective record-based study

Inclusion Criteria: Pregnant Females aged 18-40 years at the Obstetrics and Gynaecology Department

Methods of data collection

The present retrospective record-based study was carried out by obtaining the records of pregnant females aged 18-45 years at the Obstetrics and Gynaecology Department during the period of January

to December 2022. All the details of patients along with history was noted. Risk factors of having fetal abnormality were noted. A detailed systemic and obstetric examination as per the records was along with all preliminary investigations were noted down.

Statistical analysis and methods-

Data will be collected by using a structure proforma. Data entered in MS excel sheet and analyzed by using SPSS 24.0 version IBM USA. Qualitative data will be expressed in terms of proportions. Quantitative data will be expressed in terms of Mean and Standard deviation. Association between two qualitative variables will be seen by using Chi square/ Fischer's exact test. A p value of <0.05 will be considered as statistically significant.

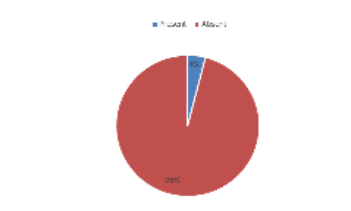
Results

Table 1: Distribution according to age

Age group in years	Frequency	Percent
≤ 20	5	5.0
21-25	53	53.0
26-30	25	25.0
31-35	12	12.0
36-40	5	5.0
Total	100	100.0

We included total 100 pregnant women in our study. Majority of them were from 21-25 years age group i.e. 53% followed by 25% from 26-30 years, 12% from 31-35 years, 10% from less than 20 years and 5% from 36-40 years age group.

Figure 1: Prevalence of congenital anomaly



Total number of anomalies detected were 4 out of 100. Hence prevalence of congenital anomaly in our study was 4%.

Prevalence according to type of anomaly revealed Cleft Lip and palate (1%), fetal PDA (1%), Down's Syndrome (1%) and Pyloric Stenosis with epidermolysis bullosa (1%)

Age wise prevalence of anomaly revealed that Cleft Lip & palate was found in 36-40 years age group. Down's Syndrome was found in 31-35 years age group. Fetal PDA and Pyloric Stenosis with epidermolysis Bullosa in 20-25 years age.

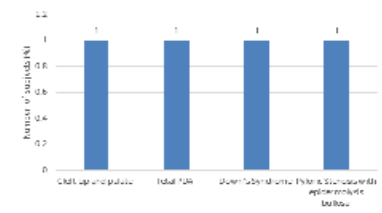


Figure 2: Type of congenital anomaly and association with age

Total number of anomalies detected were 4 out of 100. Hence prevalence of congenital anomaly in our study was 4%.

Prevalence according to type of anomaly revealed Cleft Lip and palate (1%), fetal PDA (1%), Down's Syndrome (1%) and Pyloric Stenosis with epidermolysis bullosa (1%)

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Table 2: Gravida wise distribution

Gravida	Congenital Anomaly Present (n=4)	Percentage (%)	Congenital Anomaly Absent (n=96)	Percentage (%)
1	2	50	32	33.33
2	0	0	25	26.04
>3	2	50	39	40.63
Total	4	100	96	100.00

Out of 4 congenital anomalies, 2 were in mother with primigravida and remaining 2 in multigravida with no significant association between gravida status and congenital anomaly ($p>0.05$).

Table 3: Previous History of Congenital Anomaly

Previous History of Congenital Anomaly	Congenital Anomaly Present (n=4)	Percentage (%)	Congenital Anomaly Absent (n=96)	Percentage (%)
Yes	0	0	4	4.17
No	4	100	92	95.83
Total	4	100	96	100.00

Previous History of Congenital Anomaly risk factor was not seen in our study

Discussion

Prevalence of congenital anomaly

We included total 100 pregnant women in our study. Majority of them were from 21-25 years age group i.e. 53% followed by 25% from 26-30 years, 12% from 31-35 years, 10% from less than 20 years and 5% from 36-40 years age group. Total number of anomalies detected were 4 out of 100. Hence prevalence of congenital anomaly in our study was 4%.

Sarkar S. et al⁷ screened 12896 new-borns, of which 286 had congenital malformations, making the prevalence 2.22%. It is less as compared to our study findings.

Our prevalence of 4% which is comparable with the earlier studies from India, which is less as compared to reported incidence of 2.72% and 1.9%.^{8,9}

There are other reports from different parts of the world representing different frequency of congenital malformations.^{10,11}

Aravazhi M. et al¹¹ reported the antenatal prevalence of congenital malformation in their study was 1.95% which is comparable with our study prevalence.

Our results are also comparable with the observations of Wong et al¹² which is 1.4% and Nakling et al¹³ which is 1.5%, Patel et al¹⁴ which is 1.6%.

Type of congenital anomaly

We observed the prevalence according to type of anomaly revealed Cleft Lip and palate (1%), fetal PDA (1%), Down's Syndrome (1%) and Pyloric Stenosis with epidermolysis bullosa (1%).

Age wise prevalence of anomaly revealed that Cleft Lip & palate was found in 36-40 years age group. Down's Syndrome was found in 31-35 years age group. Fetal PDA and Pyloric Stenosis with epidermolysis Bullosa in 20-25 years age.

With regard to pattern of congenital anomalies in the study, Sarkar S. et al¹⁵ the most common system involved was musculoskeletal system (33.2%), followed by gastro-intestinal tract (GIT) (15%), CNS (11.2%), genitourinary (10.5%), cardiovascular system (9.1%), skin (8.7%) etc.,

The findings of our study are comparable with studies conducted by others.⁸⁻¹¹

Conclusion: Prevalence of congenital anomaly in our study was 4%. We observed Cleft Lip and palate (1%), fetal PDA (1%), Down's Syndrome (1%) and Pyloric Stenosis with epidermolysis bullosa (1%).

Conflict of interest: None

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