



THE STUDY OF PREVALANCE AND ASSOCIATED FACTORS OF CONGENITAL ANOMALIES IN A TERTIARY CARE CENTRE

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ABSTRACT **Background** – A birth defect or congenital anomaly is an abnormality of structure, function or body metabolism that is present at birth. This study brings about the prevalence of congenital anomalies among antenatal patients in a tertiary care center and also pattern of anomalies, along with associated factors. **Aims And Objectives-** To assess the prevalence and associated factors of congenital anomalies in a tertiary care center. **Methodology-** A retrospective analytical hospital based study was conducted from march 2021-22 on pregnant women who are admitted into wards in GOVERNMENT GENERAL HOSPITAL, ANANTHAPURAMU. Those fetuses induced in second trimester following detection by ultrasound & those babies detected to have congenital anomalies by post-natal examination were included in the study. Data of 144 cases collected by interviewing the mothers and reviewing the existing patient records. **Results-** In the study period 144 babies were anomalous with 1.2% prevalence. Anomalies of CNS were commonest (36%), the ultrasound detection rate was 68%. Maternal age more than 25yrs is seen in 55%. About 16% of mothers had consanguineous marriage. 8.6% cases had a positive family history. About 4.7% cases had history of anti-epileptic drugs. Maternal diabetes contributed 24.48% of cases. **Conclusion** – The study helps to know the pattern of congenital anomalies and the relationship of various gestational and familial factors and the importance of ultrasound in diagnosing anomalies

KEYWORDS : Diabetes mellitus, Congenital anomalies, Consanguinity.

INTRODUCTION

According to WHO, Congenital anomalies are defined as structural or functional anomalies that occur during intrauterine life. In India the reported incidence of congenital anomalies is 2.5%.

Congenital anomalies account for 8% to 15% of perinatal deaths and 13% to 16% of neonatal deaths in India. Around 10-13% are because of environment and 12-25% are attributed to genetic causes. Our hospital is a tertiary care medical college hospital receiving patients from nearby areas.

It is important to know the frequency, pattern of congenital anomalies and various presentations which will help to develop strategies for patient counselling and management.

AIMS AND OBJECTIVES

This study was aimed at presenting the spectrum of various congenital anomalies, epidemiological features of pregnant women with anomalous fetus, Fetal and neonatal details, other associated antenatal complications and mode of delivery in government general hospital, Ananthapuram

MATERIALS & METHODOLOGY

The study was a Retrospective, observational study done in the department of obstetrics and Gynaecology in Government General hospital, Ananthapuram over a period of one year from March 2021 to march 2022.

The study included all pregnant women with foetal anomalies. Relevant information regarding maternal age, parity, gestational age, birth weight, sex, and consanguinity was documented. Significant antenatal history like maternal illness, ingestion of drugs, exposure to radiation and complications of labor was recorded. Antenatal ultrasonography (USG) findings were noted. All the aborted fetus and newborns were examined for congenital malformations soon after delivery.

RESULTS

In the study period 144 babies were anomalous and this gives a incidence of congenital anomalies in the antenatal patients as 1.2%.

Table-1: Patterns of anomalies noted

System	Count	Percentage
Central nervous system	52	36%

Musculoskeletal system	34	23%
Genitourinary system	26	18%
Cardiovascular system	16	11%
Gastrointestinal system	8	6%
Syndromes	8	6%
Total	144	100

Table-2 : Pre Conceptional-folic Acid Intake

Pre conceptional folic acid intake	Number of cases
Absent	98 cases (68.1%)
Present	46 cases (31.9%)
Total	144 (100%)

Table-3: Maternal Diabetes

Material Diabetes	Number of cases
Present	17 cases (24.48%)
Absent	127cases (75.52%)
Total	144 (100%)

Table-4: Congenital Anomalies Diagnosed On Ultrasonography

Congenital anomalies diagnosed on ultrasonography	98 cases (68%)
Patients with congenital anomalies Not diagnosed on ultrasonography	46 cases (32%)
Total	144(100%)

Table-5: Mode of Delevery

Abortions	50	35%
Preterm	54	37.5%
Vaginal delivery	21	14.5%
LSCS	19	13%

Table-6: Significant Factors Associated With Congenital Anomalies

Factor	Number of cases	Percentage
Maternal age>25 years	79	55%
Multiparous women	115	80%
Presence of consanguinity	23	16%
Low socioeconomic status	129	90%
Obesity (BMI>30)	42	42%
Presence of maternal epilepsy	7	4.7%
Anemia	43	30%
Presence of polyhydramnios	47	32.6%

DISCUSSION

In this study, Central nervous system is most commonly involved(36%) followed by musculoskeletal system(23%)

Periconceptional intake of folic acid is absent in 68% of cases

Maternal diabetes is present in 24.48% of cases

Significant factors associated with congenital anomalies in this study are multiparous women of low socio-economic status, presence of anemia & polyhydramnios, maternal obesity, maternal epilepsy.

CONCLUSION

Figure-1



Figure-2

The present study concluded that Central nervous system was commonly involved. About 80% of fetal anomalies are seen in multiparous women.

90% of fetal anomalies are seen in pregnant women belonging to low socioeconomic status.

Fetal anomalies are more seen in obese and vegetarian pregnant women in my study.

No specific anomaly attributed to occupation and there is no regional localization of anomaly in my study

REFERENCES

1. Grover N. Congenital malformations in Shimla. *Indian J Pediatr.* 2000;67:249-51.
2. Congenital anomalies fact sheet N 370, World health organization. 2014:5.
3. Kalter H, Warkany J. Medical progress. Congenital malformations: etiologic factors and their role in prevention. *N Engl J Med.* 1983;308:424-33.
4. Nelson K, Holmes LB. Malformations due to presumed spontaneous mutations in newborn infants. *N Engl J Med.* 1989;320:19-23.
5. Singh A, Gupta RK. Pattern of congenital anomalies in new-borns: a hospital based prospective study. *JK Sci.* 2009;1:34-6.
6. Basavanthappa SP, Pejaver R, Srinivasa V, Raghavendra K, Suresh Babu MT. Spectrum of congenital malformations in newborns: in a medical college hospital in South India. *Int J Adv Med.* 2014;1:82-5.
7. Bhat V, Babu L. Congenital Malformations at Birth - A Prospective Study from South India. *Indian J Pediatr.* 1998;65:873-81. 8. Sachdeva S, Nanda S, Bhalla K, Sachdeva R. Gross congenital malformation at birth in a government hospital. *Indian J Public Health.* 2014;58:54-6