



ORIGINAL RESEARCH PAPER

Anatomy

IS THE PREVELANCE OF ANENCEPHALY HIGHER AMONG NORTHEN POPULATION: AN OBSERVATIONAL STUDY REPORTED IN DRPGMC KANGRA AT TANDA

KEY WORDS: Anencephaly, Congenital Talipus Equino Varus, fetal autopsy

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ABSTRACT

Introduction: Anencephaly is one of the lethal fetal anomalies occurs due to failure of closure of cranial neuropore during the fourth week of development results in exposure of brain substance to the surface as an irregular degenerated mass. Since incidence of congenital malformation is very higher nowadays, so, the present study was an attempt to reveal the prevalence of Anencephaly and their sex distribution among Northern population reported at DRPGMC Kangra at Tanda. **Material And Methods:** After obtaining permission from ethical committee of the college, study was conducted in the departments of anatomy and pathology DRPGMC Tanda, HP over a period of three years (2017-2020), among eighty fetuses with gestational age between 11-40weeks during routine fetal autopsy. **Results And Observation:** There were thirty fetuses with congenital malformation among eighty cases. Anencephaly was seen in eleven fetuses. Out of eleven cases, there were three females and eight males. **Conclusion:** It is concluded that the prevalence of Anencephaly is higher in the Northern population.

INTRODUCTION

Anencephaly is one of the lethal fetal anomalies which occur due to the failure of closure of cranial neuropore during the fourth week of development results in exposure of brain substance to the surface as an irregular degenerated mass. It is characterized by absence of vault of skull exposing the brain that gets degenerated and malformed. There will be absence of swallowing reflex in the fetus and hydramnios in the last trimester.¹

Several studies support a genetic component to NTD and are associated with chromosomal abnormalities, mostly trisomy 13 and trisomy 18. NTDs are also associated with genetic syndromes, including Meckel's syndrome, Anterior sacral meningocele, Currarino syndrome, and anal stenosis². The inheritance patterns and recurrence risks for such congenital anomalies do not follow a mendelian pattern^{3,4}. Clinical studies having randomized control trials and population based fortification programme has confirmed the efficacy of preconceptional administration of 400µg folic acid in reducing NTDs occurrence as much as 60%⁵.

Since rate of systemic malformations is higher and the studies on fetuses were found less, the present study was an attempt to reveal the prevalence of Anencephaly among northern population.

MATERIAL AND METHODS

Human fetus specimens obtained from abortion, stillborn and intrauterine death were provided by the department of Obstetrics & Gynaecology for routine fetal autopsy in the Department of Pathology and Anatomy DRPGMC Kangra at Tanda in the duration of three years (2017-20) after obtaining the permission of institutional ethics committee. Written informed consent of the parents was taken for the study. There are total eighty fetuses with gestational age between 11-40 weeks during routine fetus autopsy.

RESULT

We received eighty cases in the hospital. All were examined thoroughly.

There were total 43 males and 37 females among 80 cases. Intrauterine deaths at term were reported more in male fetuses. Thirty Congenital malformed fetuses were reported, 17 males and 13 females. Among thirty cases, eleven cases were of Anencephaly, 8 males and 3 females. The study showed a significantly higher occurrence of Anencephaly

among males 73% compared to females 27%.

Table 1: Sex Distribution

| SEX | Among 80 fetuses | Among congenital Malformed fetuses | Among Anencephalus fetuses |
|--------|------------------|------------------------------------|----------------------------|
| MALE | 43 | 17 | 8 |
| FEMALE | 37 | 13 | 3 |

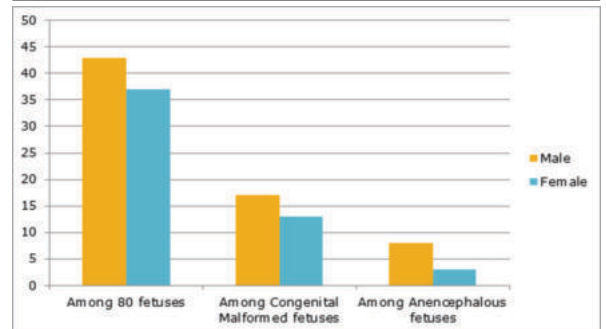


Figure 1: SEX DISTRIBUTION

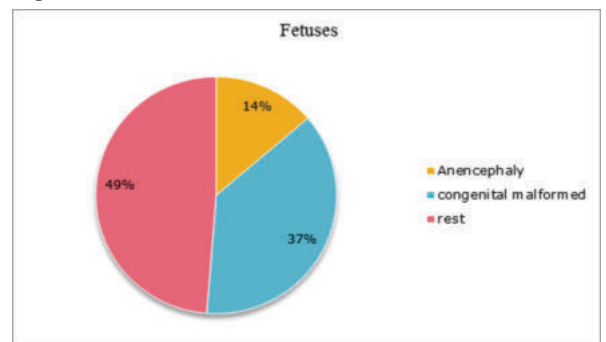


Figure 2: ANENCEPHALY AMONG FETUSES

OBSERVATION

Present study showed thirty Congenital malformed fetuses. Among them the percentage of Anencephaly was 27%. Rest malformed fetuses were related to cardiovascular system, gastrointestinal system and musculoskeletal system. The study showed a significantly higher occurrence of Anencephaly among males 73% compared to females 27%.

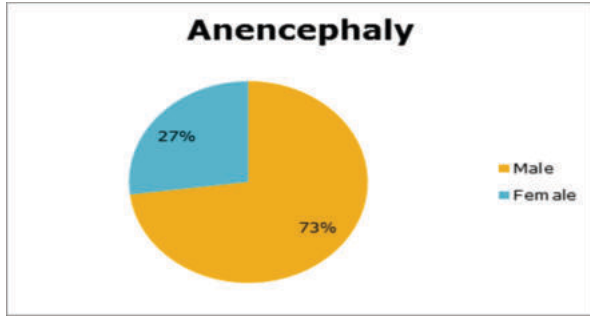


Figure 3: SEX DISTRIBUTION AMONG ANENCEPHALY

This study observed that the congenital malformations in various systems of the body can't be ignored. The incidence of Anencephaly was more among congenital malformed fetuses.

CONCLUSION

From this study we concluded that the prevalence of Anencephaly is higher in Northern population among congenital malformation.

Limitations:

Data was collected from the cases found at Dr Rajendra Prasad Govt Medical College Kangra at Tanda only.

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