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### RESEARCH ARTICLE

#### FETAL ANOMALIES RESULTING IN TERMINATION OF PREGNANCY IN CONSANGUINEOUS MARRIAGE - AN EXPERIENCE IN TERTIARY CARE

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##### Manuscript History

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##### Key words:-

Fetal, Anomalies, Pregnancy, Termination and Consanguineous Marriage

#### Abstract

**Objectives:** To know the Fetal anomalies resulting in termination of pregnancy in consanguineous marriage.

##### Material and Methods:

**Source of Data** This study was performed in the department of radio-diagnosis Basaweshwara Teaching and General Hospital, on patients referred from Obstetrics and Gynaecology Department from September 2021-April 2022.

1. **Sample size:** Twenty Cases.
2. **Type of study:** Prospective Study.
3. **Inclusion Criteria:**

All Patients were with 18-20 weeks of gestation.

Retrieved data was tabulated and fed in SPSS 20 for analysis.

##### Results:

1. Data of 20 patients who came for anomaly scans were monitored. Mean age of patient was (Min 19 and Max 35). Mean gestational age at which Anomaly scan was carried out was 18-22 weeks (Min 17 weeks and max 24 week).
2. Early termination was performed in 80 % (10 out of 20) cases and late termination was done in 20 % (5 out of 20) cases.
3. Analysis of fetal anomalies showed that CNS anomalies 50% (9 out of 20), and multiple anomalies 10% (4 out of 20).
4. Further analysis showed that CNS anomalies for which PT was carried out includes hydrocephalus 40% (9 out of 20). Enteric system (4 out of 20) MSK (2 out of 20).

**Conclusion:** CNS abnormalities are the top reason to terminate pregnancy, followed by cases with multiple abnormalities and renal anomalies.

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#### Introduction:-

Fetal malformation is one of the foremost reasons of perinatal mortality. Congenital abnormalities lead to permanent disabilities, frequent hospitalization and major health burden. Prenatal diagnosis of fetal anomalies is on the increase due to the accessibility of modern diagnostic and screening tests. And such prenatal diagnosis persuades the

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management by mode of delivery, place of delivery and decision to terminate pregnancy. Fetal surgery has been developed as a separate subspecialty of pediatric surgery in the developed world. And this is one of the reasons of growing interest in prenatal diagnosis of congenital malformations.

Ultrasound is routinely used in antenatal care and has the benefits of easy availability, non invasiveness, low cost. Moreover ultrasound has been regarded as sensitive and specific prenatal diagnostic modality. Other diagnostic procedure like amniocentesis, chorionic villous sampling, fetal skin and liver biopsy are not in common practice, for the reason that these are costly, invasive and not easily available.

PT is perceived differently in different societies and is a subject of debate on religious ground. Literacy rate, religious beliefs and emotional factor are involved in refusal of indicated legal PT. Unfortunately; unsafe pregnancy termination is high in Kalyana Karnataka Region. Lack of education, poor socioeconomic status, lack of access to contraception and unwanted pregnancies are the main reasons behind these unsafe terminations of pregnancies. The law of this country allows termination of pregnancy on medical grounds of fetal anomalies with poor outcome of pregnancy and any deleterious effect on the mother's health. PT is performed as early and late, early PT is carried out before 24 weeks and late PT after 24 weeks of gestation. Complication rate increases with late PT. The termination rate of pregnancy is increasing and fetal anomalies diagnosed by ultrasound are an important reason behind this. This is most important and controversial issue, but unfortunately there is inadequate research on it. This study was conducted to know the spectrum and frequency of fetal anomalies resulting in termination of pregnancy in consanguineous marriage –an experience in tertiary care.

### **Aims and Objectives:-**

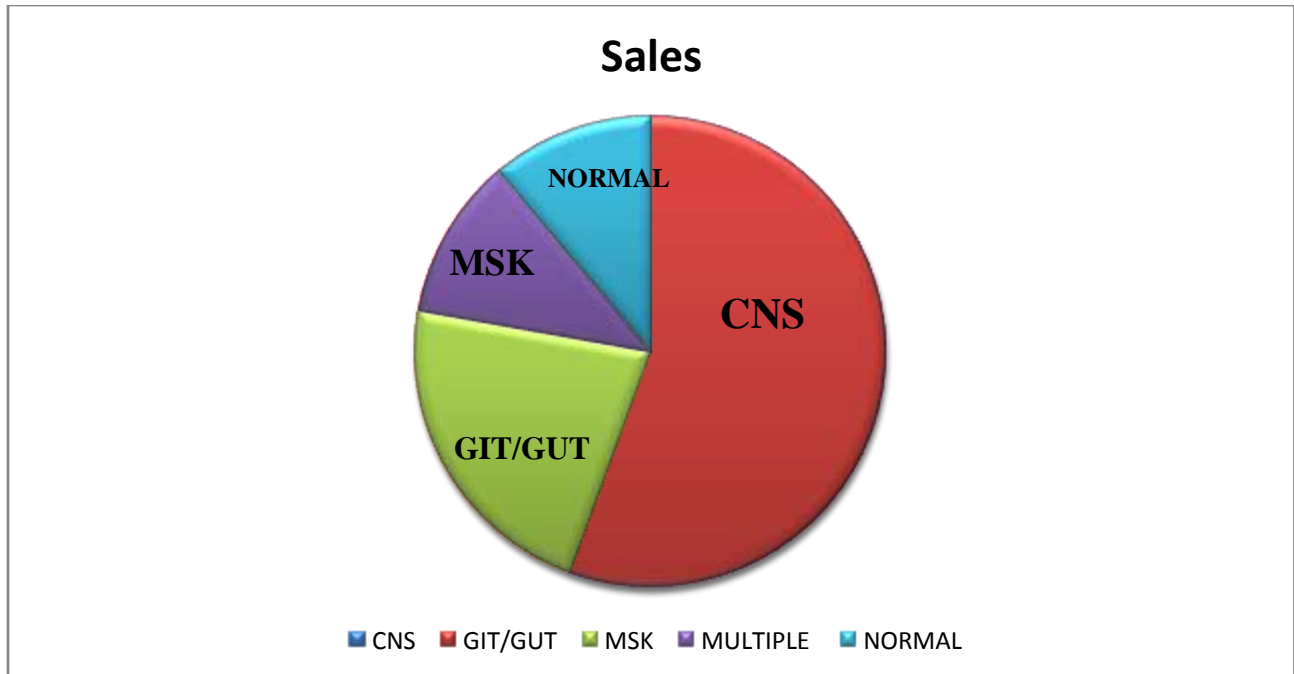
1. To correlate the spectrum of fetal anomalies as cause of termination of pregnancy in consanguineous marriage.
2. To identify and assess fetal anomalies at the earliest on routine antenatal scans.

### **Material and Methods:-**

Researcher retrospectively reviewed 20 patients who underwent PT in Basaweshwara Teaching and General Hospital, Gulbarga, Karnataka, on patients referred from obstetrics and gynaecology department from September 2021 - April 2022. Data was retrieved regarding patient's age, gestational age at which fetal anomaly was diagnosed, type of fetal anomaly diagnosed by scan, method of termination of pregnancy and gender of the fetus. AS a part of Research in M D Radiology, Institutional Review Board permission was taken for this study.

The collected data were revised, tabulated, coded and fed in PC having statistical analysis program SPSS-20. Data was presented and suitable analysis was carried out according to the type of data. Descriptive statistics: Mean, SD and rang for numerical data like patient age, Period of gestation while Frequency and percentage for categorical data like gender, timing of pregnancy termination (early/late), fetal anomaly type.

Fetal anomaly type	Timing of pregnancy termination	
	Early termination	Late termination
<b>CNS</b>	<b>6</b>	<b>3</b>
<b>GI</b>	<b>2</b>	<b>0</b>
<b>RENAL</b>	<b>0</b>	<b>1</b>
<b>MULTIPLE ANOMALIES</b>	<b>1</b>	<b>1</b>



During the routine antenatal checkups, ultrasound scan is performed and special anomaly scan carried out in all pregnant patients between 18 to 20 weeks. As soon as the diagnosis of fetal abnormality is confirmed through ultrasound scan, then pediatric surgeon opinion is taken regarding the prognosis of a fetus if born alive.

After confirmation of fetal anomaly, counseling of the couple is done. Severity of fetal anomaly, methods of PT was used, mainly discussed in counseling with the couple to make the decision of PT. After taking consent pregnancy termination was performed in all patients medically or surgically. Method of termination was decided by gravidity, parity and period of gestation. All patients were discharged home after 24 hours monitoring in the unit.

#### CASE -1 :24YRS FEMALE PATIENT WITH RAISED NUCHAL TRANSLUCENCY m/s 2.9mm .



CASE 2- 27 YRS OLD FEMALE PATIENT WITH 12WEEKS 2 DAYS OF GESTATION.



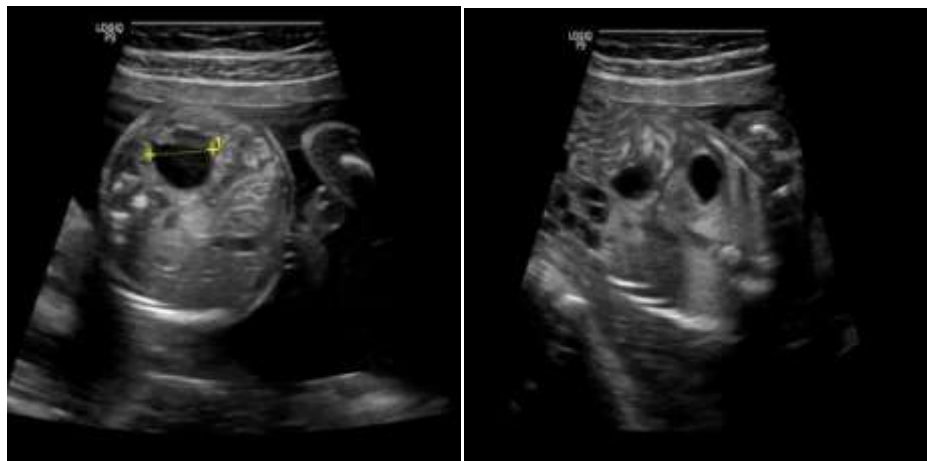
**Findings:**

A well defined cystic lesion seen in neck extending on both sides of midline. And also increased nuchal translucency is seen.

CASE 3--:30 YR OLD FEMALE WITH G3P2L2 WITH 5 MOA CAME FOR ANOMALY SCAN

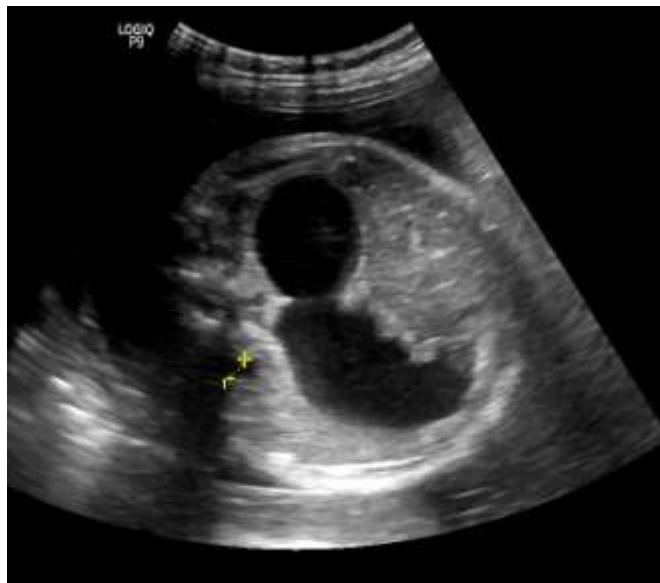


CASE 4-:22 yrs female patient with 19 weeks of gestation



**Left kidney pylectasis**

CASE 5:-23 YRS female patient with 18 weeks 3days of gestation.



**Findings:**

Polyhydramnios with two communicating cystic structure in upper abdomen of the fetus, suggestive of double bubble sign and representing over distended fetal stomach and proximal duodenum.

CASE 7:-22YRS FEMALE PATIENT WITH 19 WEEKS OF GESTATION





### Results:-

1. Data of 20 patients who came for anomaly scans were monitored. Mean age of patient was (Min 19 and Max 35). Mean gestational age at which Anomaly scan was carried out was 18-22 weeks (Min 17 weeks and max 24 week).
2. Early termination was performed in 80 % (10 out of 20) cases and late termination was done in 20 % (5 out of 20) cases.
3. Analysis of fetal anomalies showed that CNS anomalies 50% (9 out of 20), and multiple anomalies 10% (4 out of 20).
4. Further analysis showed that CNS anomalies for which PT was carried out includes hydrocephalus 40% (9 out of 20).Enteric system (4 out of 20) MSK (2 out of 20).

### Discussion:-

1. In the current study we analyze structural fetal anomalies which end in pregnancy termination. Ultrasound was the main modality used for diagnosis of structural fetal anomalies. Severity of fetal anomalies and its bad prognosis fully explained to the couple and decision of PT was taken. Current study focus is on structural fetal anomalies as screening for chromosomal anomalies with invasive procedure was not in a common practice in study station.
2. Anomaly scan performed at 18 to 22 weeks of gestational age is the investigation of choice for structural anomalies. High cost, risk of abortion and refusal of consent for such investigation were responsible for small number of invasive procedures. Invasive techniques are restricted to certain high risk population, like having family history of congenital anomalies<sup>12</sup>.
3. Literature review of fetal anomalies has clarified that 39 to 54 % of PT was carried out due to CNS abnormalities. Reported subgroup of CNS anomalies neural tube defects (Anencephaly, Spina bifida), hydrocephalus, dandy walker malformation, holoprosencephaly<sup>18</sup>.
4. Current study endorsed the same finding with CNS anomalies as the main reason for PT. Some studies have reported neural tube defect as the most common CNS anomaly leading to PT while in current study it is on the second position.
5. Renal tract abnormalities are 15% of prenatal diagnosed congenital malformation and also an important reason to terminate pregnancy. More and more renal anomalies are diagnosed in this modern era, but some are famous for PT like polycystic kidney disease and renal agenesis.
6. Multiple anomalies detected in the fetus, is one the reasons to take decision for pregnancy termination. Anomalies severity directly correlates with PT<sup>23</sup>. In current study, 19% patients were subjected to PT for multiple anomalies, which is the largest percentage after CNS anomalies.

### Conclusion:-

CNS abnormalities are the top reason to terminate pregnancy, followed by cases with multiple abnormalities and renal anomalies.

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