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STUDY OF FETOMATERNAL OUTCOMES IN WOMEN WITH THREATENED ABORTION IN THE FIRST TRIMESTER

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ABSTRACT **Introduction:** Threatened abortion in first trimester is a risk factor for complications in the latter half of pregnancy. The present study was undertaken to identify the pregnancy outcome in women with threatened abortion in the first trimester of pregnancy in a tertiary hospital. **Aim and Objective:** To evaluate the maternal and perinatal outcomes in women with threatened abortion in the first trimester. **Material and Methods:** This hospital-based observational study was conducted in the Department of Obstetrics and Gynaecology at SMS Medical College, Jaipur. It involved 120 women with first-trimester threatened abortion who attended antenatal clinics and emergency services at SMS Medical College and its affiliated hospitals. **Results:** The study's mean age was 27.08 ± 4.30 years. Of 120 cases, 21.67% resulted in miscarriage: 9.2% missed, 7.5% complete, and 5% incomplete. Among 94 continuing pregnancies, 2.5% had intrauterine fetal death and 75.8% had a live fetus. Maternal issues included preterm labor (8.5%), PROM (6.4%), placenta previa (3.2%), abruption (5.3%), gestational hypertension (8.5%), preeclampsia (7.4%), eclampsia (4.3%), postpartum hemorrhage (5.3%), HELLP syndrome (1.1%), and gestational diabetes mellitus (1.1%). Deliveries were 73.4% vaginal, 25.5% cesarean, and 1.1% instrumental. **Conclusion:** First trimester threatened abortion increases the risk of adverse maternal outcomes like preterm labor, PROM, and hypertensive disorders, as well as perinatal issues such as low birth weight and respiratory distress. Risks are higher with early onset, heavy bleeding, subchorionic hematoma, and prior abortions. Awareness of these risks is vital for effective antenatal care and timely interventions.

KEYWORDS : Threatened Abortion, First Trimester, Maternal outcome.

INTRODUCTION

Threatened abortion refers to any vaginal bleeding in the first 20 weeks of pregnancy, without cervical dilatation or passage of products of conception, whether or not this bleeding is associated with uterine contractions.[1] According to available data, threatened abortion is seen in 20-25% of all pregnancies.

In threatened abortion the process of miscarriage has started but has not progressed to a state from which recovery is not possible. The patient with threatened abortion have symptoms suggestive of pregnancy, and complains of bleeding per vaginum which is usually slight and may be brownish or bright red in colour. Bleeding is usually painless but patients may have mild backache or dull pain in the lower abdomen. Pain appears usually following hemorrhage.[2]

A definitive diagnosis of threatened abortion needs documentation of foetal cardiac activity following ultrasonographic examination.[3] Many studies suggest that first trimester vaginal bleeding has an association with bad pregnancy outcomes.[4]

In around 90–96% of cases, a miscarriage does not occur in pregnancies that have both foetal cardiac activity and vaginal bleeding at 7–11 weeks. There is a correlation between bleeding at the later end of the gestational age range and the higher success rate on the other hand.[5]

Ultrasound is administered to any woman who is experiencing bleeding during the early stages of pregnancy in order to determine the viability of the pregnancy, the placement of the placenta, and the presence or absence of subchorionic hematoma, which is related with a rate of miscarriage that ranges from 4 to 33 percent.[6]

Bleeding in the first trimester carries a 5.5% to 42% risk of complete abortion and increases the likelihood of complications such as preterm labor, preterm premature rupture of membranes, low birth weight, antepartum hemorrhage, and fetal demise in women with threatened abortion.

MATERIAL AND METHODS

This hospital-based observational study was conducted in the Department of Obstetrics and Gynaecology at SMS Medical College, Jaipur. It involved 120 women with first-trimester threatened abortion who attended antenatal clinics and emergency services at SMS Medical College and its affiliated hospitals.

Inclusion Criteria

1. All pregnant women with threatened abortion in first trimester.
2. All pregnant women with singleton live fetus less than 12 weeks.
3. Women giving written and informed consent.
4. Women not included in any other study.

Exclusion Criteria

1. Non consenting pregnant women.
2. All pregnant women with any medical or surgical disorder.
3. All pregnant women with local cause of bleeding per vaginum.
4. History of trauma or surgery during present pregnancy.

METHODOLOGY

Women aged 19-40 years with threatened abortion in the first trimester and confirmed fetal viability on ultrasound, attending the OPD of Obstetrics and Gynaecology at SMS Medical College, Jaipur, will be included. After informed consent, patients presenting with bleeding will undergo history-taking, examinations, and ultrasound. Admitted patients will receive progesterone therapy and monitoring, with follow-up through antenatal visits. Labor and postpartum monitoring will include APGAR scores, birth weight, and complications. Wound care and maternal morbidity like infections will be assessed. Outcomes will cover maternal (e.g., abortion, hypertensive disorders, hemorrhage) and perinatal (e.g., preterm birth, low birth weight, neonatal death) factors.

Statistical Analysis

All the data was analysed using computer statistical software [Microsoft Excel, SPSS 23.0 (trial version)]. Chi - square test was used to find the association between the variables. A p- value less than 0.05 was considered as statistically significant and both groups were associated.

RESULTS AND OBSERVATIONS

In this study of 120 women, the majority of both aborted and continued pregnancies were in the 21-30 age group, with a mean age of 27.08 ± 4.30 years. Abortions were more common before 7 weeks of gestation (75%), while fewer occurred between 7-10 weeks (17.46%) and after 10 weeks (7.32%). The difference in abortion rates by gestational age was statistically significant ($P < 0.05$). Of the 120 cases, 64.2% were multigravida and 35.8% primigravida. Abortions were more common among multigravida patients (25.97%) compared to primigravida patients (13.95%), but this difference was statistically non-significant ($P > 0.05$).

Table 1: Distribution of Cases According to Pregnancy Outcomes.

Pregnancy Outcome	Frequency (N=120)	Percentage (%)
Missed Abortion	11	9.2
Incomplete Abortion	6	5
Complete Abortion	9	7.5
IUFD (Intrauterine Fetal Death)	3	2.5
Alive Fetus	91	75.8

Table 1 shows that 21.67% of the 120 cases resulted in miscarriage: 9.2% missed, 7.5% complete, and 5% incomplete. Of the 94 cases that continued, 2.5% had intrauterine fetal death and 75.8% had a live fetus.

Table 2: Distribution of Cases According to Bleeding Pattern.

Bleeding Pattern	Frequency (N=120)	%	Aborted (N=26)	% Aborted	Continued (N=94)	% Continued	P-Value
Spotting	96	80	8	8.3	88	91.7	<0.0001
Heavy	24	20	18	75	6	25	

Table 2 shows that 80% of the 120 cases had spotting, and 20% had heavy bleeding. Among the 26 cases that aborted, 30.77% had spotting and 69.23% had heavy bleeding. In the 94 cases that continued, 93.62% had spotting.

In our study, 33.3% of 120 cases had a history of abortion. Among the 26 cases that aborted, 73.08% had a previous abortion history. Of the 94 cases that continued, 22.34% had a history of abortion. The chi-square test indicated a significant link between previous abortion history and current abortion (Chi Sq = 23.592, P < 0.0001). Additionally, 20.8% of cases had a subchorionic hematoma. Among the 26 cases that aborted, 53.85% had a subchorionic hematoma. The chi-square test showed a significant association between subchorionic hematoma and abortion (Chi Sq = 21.933, P < 0.0001).

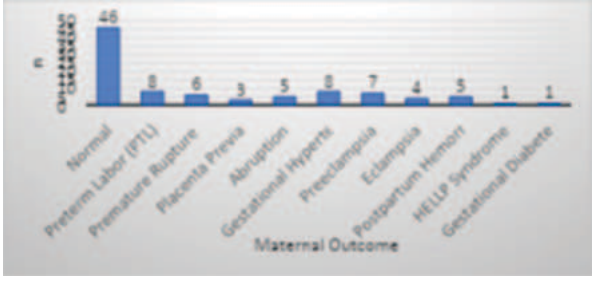

Figure 3: Distribution of Cases According to Maternal Outcomes.

In Figure 3, of the 94 pregnancies, 46 (48.9%) had normal outcomes. Other maternal issues included preterm labor (8.5%), premature rupture of membranes (6.4%), placenta previa (3.2%), abruption (5.3%), gestational hypertension (8.5%), preeclampsia (7.4%), eclampsia (4.3%), postpartum hemorrhage (5.3%), HELLP syndrome (1.1%), and gestational diabetes mellitus (1.1%).

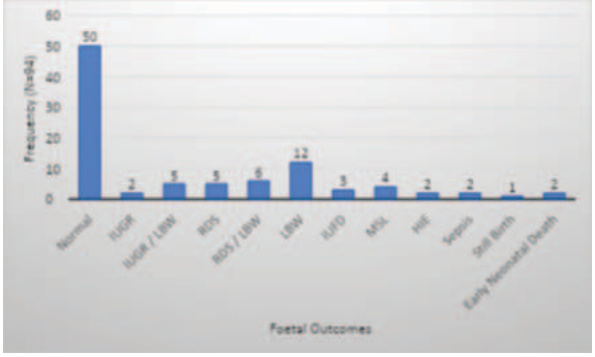

Figure 4: Distribution Of Cases According To Foetal Outcomes.

In the present study of the 94 pregnancies, 50 (53.2%) had normal outcomes, 2 (2.1%) had intrauterine growth restriction (IUGR), and 5 (5.3%) had respiratory distress syndrome (RDS). Additional outcomes included low birth weight (6 cases, 6.4%), intrauterine fetal death (12 cases, 12.8%), and meconium-stained liquor (3 cases, 3.2%). Hypoxic ischemic encephalopathy was observed in 4 cases (4.3%), sepsis in 2 (2.1%), stillbirth in 1 (1.2%). , and early neonatal death in 2 (2.1%). Among 90 recorded birth weights, 2 cases (2.2%) were under 1.5 kg, 37 (41.1%) were between 1.5-2.5 kg, and 51 (56.7%) were over 2.5 kg.

Table 5: Distribution Of Cases According To Mode Of Delivery

Mode of Delivery	Frequency (N=94)	Percentage (%)
Vaginal Delivery	69	73.4
LSCS (Lower Segment Caesarean Section)	24	25.5
Instrumental Delivery	1	1.1

As shown in table 4, out of 94 cases who continued pregnancy, 69 (73.4%) cases had vaginal delivery, 24 (25.5%) cases delivered by Lower segment caesarean section and 1 (1.1%) case needed instrumental delivery.

DISCUSSION

In this study of 120 women, the mean age was 27.08 ± 4.30 years, with most pregnancies occurring in the 21-30 age group. In comparison, Mousumi Ghosh et al.[7] reported a mean age of 24.05 ± 5.27 years, while Yasmin et al.[8] found a mean age of 26.53 ± 6.36 years.

In this study, abortions were most common before 7 weeks of gestation (75%), with fewer occurring between 7-10 weeks (17.46%) and after 10 weeks (7.32%). The difference in abortion rates by gestational age was statistically significant (P < 0.05). Hasan R et al.[9] also found that threatened abortions were highest between 5-8 weeks of gestation.

We found that 21.67% of the 120 cases resulted in miscarriage, with 9.2% missed, 7.5% complete, and 5% incomplete. Of the 94 cases that continued, 2.5% had intrauterine fetal death and 75.8% had a live fetus. Amirkhani et al.[10] reported a 30% abortion rate, while Talwar et al.[11] found an 18% rate.

In the present study, 80% of the 120 cases had spotting and 20% had heavy bleeding. Among the 26 cases that aborted, 30.77% had spotting and 69.23% had heavy bleeding. In the 94 cases that continued, 93.62% had spotting. Moushumi Ghosh et al.[7] reported that 83.16% of 190 patients had spotting, with 58.42% of these patients aborting, and 24.74% continuing pregnancy. Heavy bleeding was observed in 16.84% of patients, with 15.78% aborting and 1.05% continuing, a difference that was statistically significant.

In the present study, of the 94 cases that continued, 73.4% had vaginal deliveries, 25.5% had lower segment cesarean sections, and 1.1% required instrumental delivery. Mousumi Ghosh et al.[7] reported that 48.4% of 37 viable pregnancies had vaginal deliveries, 45.94% were delivered by cesarean section, and 5.4% required instrumental delivery. Saraswat L et al.[12] found no relation between first trimester threatened abortion and mode of delivery.

CONCLUSION

First trimester threatened abortion is linked to higher risks of adverse maternal outcomes like preterm labor, PROM, and hypertensive disorders, as well as perinatal issues such as low birth weight, IUGR, and respiratory distress. Risks increase with early onset, heavy bleeding, subchorionic hematoma, and a history of prior abortions. Awareness of these risks is crucial for planning effective antenatal care and timely interventions.

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