



STUDY OF PREGNANCY & FETAL OUTCOMES OF PATIENTS COMPLICATED BY THREATENED ABORTION

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ABSTRACT

AIM AND OBJECTIVES: 1. To study various maternal complications in cases of threatened abortion.
2. To evaluate fetal outcome in pregnancies complicated by threatened abortion.

MATERIAL AND METHODS: Tertiary care hospital based prospective observational study was conducted with 100 patients to analyze various maternal complications and evaluate fetal outcomes in pregnancies complicated by threatened abortion in 2 years. Appropriate statistical software including but not restricted to MS-Excel. SPSS version 20 was used for statistical analysis.

RESULTS: Observational study. The mean age of the patients was 26.1±3.4 years. 52% patients were primigravida and 48% were multigravida. The mean period of gestation at the time of delivery was 35.6 weeks ± 6.19. Out of 93 patients, 42 delivered without any complications while rest of them had some maternal or fetal complications. The most common antenatal complication was preterm premature rupture of membranes (13%) followed by pre-eclampsia (10%) and gestational hypertension (8%). Anaemia and PPH was found in 7% cases each. In fetal outcome, preterm delivery was highest (21%) followed by LBW babies (13%). Fever was the most common postnatal maternal complication.

CONCLUSION: Early pregnancy vaginal bleeding may indicate underlying placental dysfunction, which may manifest in later pregnancy by a variety of adverse outcomes including preterm delivery, pregnancy induced hypertension, placental abruption and fetal growth restriction. Conversely, since preterm delivery is associated with threatened miscarriage, identifying women who are at "high risk" for preterm labour is very important. Knowledge of this increased risk may also facilitate decision making regarding management.

KEYWORDS : Outcomes, Threatened Abortion.

INTRODUCTION

Threatened abortion is diagnosed when there is documented fetal cardiac activity with closed cervix in a case of vaginal bleeding.¹ It is the most common complication of pregnancy, occurring in 15-20% of ongoing pregnancy².

Poor maternal and fetal outcome is observed in various studies related to bleeding during early pregnancy.^{3,4} Underlying placental dysfunction has been hypothesized as a cause of adverse outcomes seen later during pregnancy in such cases.⁴ Threatened abortion has been associated with preterm labour and low birth weight,³ pre-eclampsia, preterm premature rupture of membranes (PPROM), placental abruption and intrauterine growth restriction (IUGR).⁴

AIMS AND OBJECTIVES

1. To study various maternal complications in cases of threatened abortion.
2. To evaluate fetal outcome in pregnancies complicated by threatened Abortion.

MATERIALS AND METHODS

A tertiary care hospital based prospective observational study was conducted with 100 patients to analyze various maternal complications in cases of threatened abortion and evaluate fetal outcome in pregnancies complicated by threatened abortion in 2 years.

The willing pregnant patients with bleeding per vaginum during the first twenty weeks of pregnancy were registered and managed appropriately as per the guidelines, followed prospectively at antenatal clinics and delivered at same hospital.

The diagnostic criteria for threatened abortion was based on documented fetal cardiac activity on ultrasound with a history of vaginal bleeding in the presence of a closed cervix and gestational age at 20 weeks or less.

Inclusion criteria: Cervix uneffaced, closed internal os, without any cervical pathology and single and viable pregnancy confirmed by ultrasound.

Exclusion criteria: Pregnant females with chronic hypertension, diabetes mellitus, syphilis, thrombophilia, smoker, cervical incompetence, congenital uterine anomalies, uterine fibroids or local cervical pathology like cervical polyp or erosion.

Study was ethically approved by Ethical Review Committee of our tertiary care hospital. All the data was entered in SPSS20. Appropriate statistical software including but not restricted to MS-Excel. SPSS version 20 was used for statistical analysis. The Chi square statistic was used for testing relationships on categorical variables. Student t-test was used to compare the means of a normally distributed interval dependent variable for two independent groups.

RESULTS:

Table 1: Distribution of patients according to Age

Age (yrs)	N	%
20-25	47	47%
26-30	41	41%
31-35	11	11%
>35	1	1%
Total	100	100%
Mean±SD	26.1±3.4	

Table 2: Distribution of patients according to Gravidity

Gravida	N
1	52
2	30
3	16
4	2
Total	100

Table 3: Analysis of period of gestation at delivery according to gravidity

Gravidity	N	%	Mean	SD	p Value
G1	52	52%	34.6	7.30	-

G2	30	30%	36.5	5.50	>0.05
G3	16	16%	37.5	1.86	>0.05
G4	2	2%	37.6	2.33	>0.05
Total	100	100%	35.6	6.19	

Table 4: Analysis of Maternal and Fetal Outcomes after Threatened Abortion

Outcomes	N	%
Maternal		
PPROM	11	11%
Gestational Hypertension	8	8%
Preeclampsia	8	8%
Pregnancy loss (abortion)	7	7%
PPH	7	7%
PROM	3	3%
Placenta praevia	2	2%
Retained placenta	2	2%
Abruptio placentae	1	1%
Eclampsia	1	1%
Oligohydramnios	1	%
Fetal		
Pre-term delivery	21	21%
Low birth weight (≤ 2 kg)	13	13%
Intra Uterine Growth Restriction (IUGR)	6	6%
Fetal Distress	5	5%
Meconium stained liquor	3	3%
Malpresentation	2	2%
Intra Uterine Fetal Death (IUFD)	1	1%

Table 5: Post Delivery Maternal Complications

Maternal Complications	N	%
Healthy	72	72%
Fever	9	9%
Post-Partum Hemorrhage (PPH)	7	7%
Wound Infection	6	6%
Urinary Tract Infection (UTI)	3	3%
Manual removal of placenta (MROP)	2	2%
Posterior Reversible Encephalopathy syndrome (PRES)	1	1%
Total	100	100%

Table 6: Birth Weight of New Born

Birth Weight (kgs)	N	%
<1.5	5	5.3%
1.6-2.0	8	8.6%
2.1-2.5	25	26.8%
2.6-3.0	32	34.6%
3.1-3.5	19	20.4%
3.6-4.0	4	4.3%
Total	93	100%
Mean\pmSD	2.5 \pm 0.8	

Table 7: Analysis of Neonatal Outcome

Neonatal Outcome	N	%
Healthy	62	66.7%
Respiratory Distress Syndrome (RDS)	12	12.9%
Sepsis (Necrotizing enterocolitis)	6	6.4%
Birth Asphyxia	5	5.4%
Perinatal Mortality	5	5.4%
Hypoxic Ischemic Encephalopathy (HIE)	4	4.3%
Meconium Stained Amniotic Fluid (MSAF)	3	3.2%
Intraventricular haemorrhage (IVH)	2	2.1%
Jaundice	1	1.1%
Retinopathy of prematurity (ROP)	1	1.1%

DISCUSSION

In the present study, majority of the patients (47%) were in the age

group of 18-25 years followed by 41% in the age group of 26-30 years, 11% in the age group of 31-35 years and 1% in the age group of >35 years. The mean age of the patients was 26.1 \pm 3.4 years. Similar observations in age group were reported by Talwar P et al⁵ a Sarmalkar MS et al⁶.

In the present study, mean period of gestation at the time of delivery was 35.6 weeks \pm 6.19. The mean period of gestation (POG) at the time of delivery as per gravidity were 34.6, 36.5, 37.5 and 37.6 weeks in primi, 2nd 3rd and 4th gravid respectively. Ben Haroush A et al study found the incidence of term delivery in threatened abortion to be 86.5% which was similar to our results. Dongol A et al⁷ study found the incidence of term delivery in cases of threatened abortion to be up to 75.8% in their study. In the present study, out of 93 patients, 42 delivered without any complications while rest of them had some maternal or fetal complications. The most common antenatal complication was preterm premature rupture of membranes (13%) followed by pre-eclampsia (10%) and gestational hypertension (8%). Anaemia and PPH was found in 7% cases each. In fetal outcome, preterm delivery was highest (21%) followed by LBW babies (13%). Similar findings were reported by Sarmalkar MS et al⁶, Das AG et al⁸, Agrawal S et al⁹ and Davari-Tanha F et al that threatened abortion is associated with an increased risk of certain pregnancy-related complications, namely placental abruption, preterm labour, delivery of low birth weight infants and PPRM.

In the present study, maternal complications causing significant morbidity occurred in 28 mothers. Fever was the most common postnatal maternal complication with 9 mothers suffering from it. Sarmalkar MS et al⁶ retrospective-prospective observational study reported maternal complications causing significant morbidity occurred in at least 32 mothers. Fever was the most common postnatal maternal complication which was seen in 8 mothers.

CONCLUSION:

Early pregnancy vaginal bleeding may indicate underlying placental dysfunction, which may manifest in later pregnancy by a variety of adverse outcomes including preterm delivery, pregnancy induced hypertension, placental abruption and fetal growth restriction. Conversely, since preterm delivery is associated with threatened miscarriage, identifying women who are at "high risk" for preterm labour is very important. Knowledge of this increased risk may also facilitate decision making regarding management.

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