



STUDY OF FETO-MATERNAL OUTCOME IN PREGNANT WOMEN WITH BLEEDING PER VAGINUM IN FIRST TRIMESTER OF PREGNANCY.

Obstetric & Gynaecology

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ABSTRACT

Background: Objective of the study was to study the feto-maternal outcome in patients with bleeding per vaginum in first trimester of pregnancy. **Methods:** This prospective observational study was carried out on 110 women attending with history of first trimester vaginal bleeding at a tertiary health centre Gandhinagar from June 2018 to May 2019 for a period of twelve months. Patients with history of amenorrhea and positive urine pregnancy test with bleeding per vaginum in first trimester were included. **Results:** Those patients with bleeding per vaginum in first trimester and whose pregnancy continued beyond 20 weeks of gestation, had increased rate of maternal and fetal morbidities. **Conclusions:** First trimester bleeding is significantly associated with adverse maternal and neonatal outcomes.

KEYWORDS

bleeding per vaginum, fetomaternal outcome.

INTRODUCTION

Bleeding per vaginum in the first trimester is a common obstetric entity complicating 20-25% of all pregnancies^{1,2}. Physiological bleeding in the form of implantation bleeding or Hartman's sign may be seen till 12 weeks, until the decidual space is obliterated by the fusion of decidua vera and decidua capsularis. Four major causes of pathological bleeding in 1st trimester are miscarriage (threatened, inevitable, incomplete or complete), ectopic pregnancy, implantation bleeding of pregnancy and cervical pathology³. Half of the women who experience first trimester vaginal bleeding will continue their pregnancies, and the other half will experience an abortion⁴. If pregnancy continues poor maternal and foetal outcome such as preterm delivery⁴, preterm premature rupture of membranes (PPROM), placental abruption, preeclampsia and intra uterine growth restriction (IUGR) may occur suggestive of underlying placental dysfunction⁵. It is also known that maternal age⁶, systemic diseases such as diabetes mellitus, hypothyroidism, infertility treatment⁷, thrombophilia, maternal weight and uterine structural anomalies increase the risk of abortus imminens.

OBJECTIVES

1. To estimate the degree of association between first-trimester bleeding and miscarriage.
2. To study various maternal complications and outcome of labour in pregnancy complicated by first-trimester bleeding.
3. To study the adverse foetal outcomes affected with first trimester bleeding including preterm delivery, low birth weight and small for gestational age.

METHOD

This prospective observational study was carried out on 110 women attending hospital with history of first trimester vaginal bleeding at a tertiary health centre from June 2018 to May 2019 for a period of twelve months. Patients with history of amenorrhea and positive urine pregnancy test with bleeding per vaginum in first trimester were included.

Complete history followed by complete examination (general, physical and gynaecological) of all the patients at initial visit was taken. The patients were followed up regularly in antenatal clinic and repeat ultrasound scans were done as required. A structured proforma was used to collect information and followed till their pregnancy terminated. The vaginal bleeding histories included the duration of bleeding in days, the severity of bleeding and associated abdominal pain. Bleeding was categorized as spotting, moderate, or heavy bleeding according to the self-assessed degree of vaginal bleeding.

BT, CT, PTINR and APTT was done of all the patients to rule out bleeding tendencies.

Ultrasound examination was done in all subjects who were included in

this investigation. All such patients were prospectively followed throughout the pregnancy and intrapartum period and their outcomes were studied. Postpartum follow-up was performed by telephonic talk or medical record review for 3 months. Data was entered and analyzed using Microsoft excel and Descriptive analysis was done.

The foetal outcome of the pregnancy was categorized as Non-viable outcome (termination of pregnancy before 20 weeks):

- a. Spontaneous or induced termination,
- b. Congenital malformations which was terminated before 20 weeks

Viable outcome (continuation of pregnancy after 20 weeks):

- a. Preterm delivery,
- b. Low birth weight (<2500 kg)
- c. Intra uterine growth retardation,
- d. Perinatal death,
- e. NICU admission and
- f. Full term live birth with healthy foetus.

The maternal outcome (only from those patients in which pregnancy continued beyond 20 weeks) as

- a. Anaemia (pallor and Hb <10gm% at the time of bleeding)
- b. Preeclampsia syndromes
- c. PPROM (membrane rupture <37 weeks of gestation),
- d. Placental abruption,
- e. Placenta previa,
- f. Post-partum haemorrhage,
- g. Caesarean delivery and
- h. D and E

Inclusion Criteria:

- (a) Months of amenorrhoea of less than 3 months,
- (b) Positive pregnancy test,
- (c) Bleeding per vaginum,
- (d) Previous regular cycles,
- (e) Absence of cervical and vaginal pathology,

Exclusion Criteria:

- a) Patient comes with vaginal bleeding following MTP.
- b) All patients with more than 12 completed weeks of gestation.
- c) Bleeding tendencies,
- d) History of mechanical trauma during the present pregnancy.
- e) Patients refusing participation.
- f) Patients with chromosomal abnormalities.

OBSERVATIONS:

Table 1. Basic Profile Of Study Participants

Variable	Frequency	Percentage (%)
Age(in years)		
<20	22	20
21-30	76	69

≥31	12	11
Gravidity		
Primigravida	58	53.0
Multigravida	52	47.0
Socio economic status		
Lower	92	83.64
Middle and higher	18	16.36
Pathological conditions		
Abortions	48	43.64
Ectopic Pregnancy	6	5.45
H. Mole	2	1.82
Intrauterine hematoma	10	9.09
None	44	40.00

In this study the age group ranged from 18-35 and majority (69%) of first trimester bleeding occurs in age group of 21-30 years. Also, 20 % patients were of teenage pregnancy which is a significantly high rate compared to the background population in which 8% patients were of teenage pregnancy (NFHS-4). Majority (53%) of patients were primigravida. Patients belonging to low SES have higher rate (41%) of abortion. according to this study, 8-10 weeks of amenorrhoea is most common (34.5%) time of presentation of patients with first trimester bleeding per vaginum. In this study, if abdominal pain is present, 24% of pregnancies become non-viable; and if abdominal pain is absent, 12.8% patients had nonviable outcome ; suggesting that presence of abdominal pain is associated with almost double the risk of poor outcome in current pregnancy.

STATUS AT THE END OF FIRST TRIMESTER

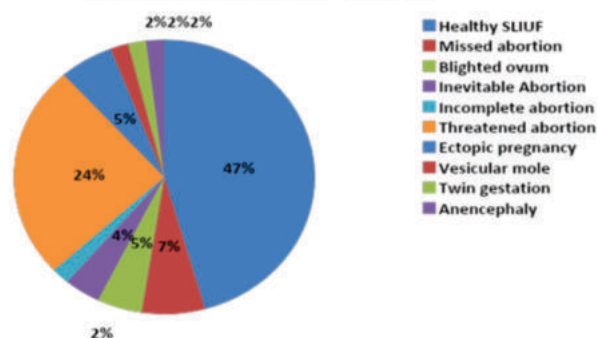


Fig. 1 Pregnancy Status At The End Of First Trimester Of Pregnancy

Table 2. Maternal And Fetal Outcome

Outcome	Frequency	(%)
Maternal outcome		
Anaemia	30	27.27
Placenta Praevia	2	1.82
Placenta Abruption	6	5.45
PPH	6	5.45
PPROM	14	12.73
PIH	6	5.45
No such complications	46	41.82
Neonatal outcome (n=79)		
Healthy	57	72.15
Birth Asphyxia	2	2.5
Hypoxic Ischemic Encephalopathy	2	2.5
Respiratory Distress Syndrome	4	5
Meconium Stained Amniotic fluid	3	3.7
Jaundice	3	3.7
Sepsis (Necrotising Enterocolitis)	1	1.2
Intraventricular Hemorrhage (IVH)	1	1.2
Retinopathy of Prematurity (ROP)	1	1.2
Perinatal Mortality	5	6.3

First trimester bleeding is also significantly associated with adverse maternal outcome like anaemia and PPROM. Increased rates of certain adverse foetal outcome like 17.2% were preterm delivery, 8.6% were IUGR and 5.7% Perinatal death was observed.

Table 3. Comparison Of Viability And Amount Of Bleeding

Amount of Bleeding	Outcome	(%)
Spotting	Viable	63.64
	Non-Viable	5.45

Moderate	Viable	9.09
	Non-Viable	12.7
Heavy	Viable	0
	Non-Viable	9.09

Out of 76 cases of spotting only 06 (8%) had non- viable outcome, 24 cases of moderate bleeding 14 (58%) had non-viable outcome and 10 (42%) had viable outcome and all 10 cases of heavy bleeding had non-viable (100%) outcome. Hence, even when a patient had spotting per vaginum for longer number of days, it is not associated with significant compromise of viability of pregnancy. However, moderate and heavy bleeding even for one day is associated with significant compromise of the viability of pregnancy.

DISCUSSION

In this study, the majority (69%) of first trimester bleeding occurs in age group of 21-30 years, which is comparable with finding of study done by Williams et al (1991)⁷ in which 86.5% patients were from 20-34 years.

Majority of patients were primi gravida constituting 53% and multigravidae constituting 47%. A similar finding was present in study done by Zhila Amirkhani et al⁸, Karnatak, India 2013. Majority of cases were primigravida 56.7% and multigravida comprised of remaining 43.3%.

Patients belonging to low SES have higher rate of abortion compared from patients belonging to higher SES. Min Kyoung et al⁹ Korea, 2018 also found the same finding in his study.

In present study abortions contributed to a major chunk constituting 43.5%. Ectopic pregnancies were 5.5% and patients with H Mole were 2%. This is comparable with Rama Sofat et al¹⁰.

Majority of first trimester bleeding patients 38(34.5%) presented between 8 to 10 weeks of amenorrhoea and least common presentation was less than 6 weeks which accounted for 16 (14.5%) of patients. So, according to this study, 8-10 weeks of amenorrhoea is most common time of presentation of patients with first trimester bleeding per vaginum. Neelam Bharadvaj et al¹¹ (%) also found the similar finding in their study. Moderate and heavy bleeding even for one day is associated with significant compromise of the viability of pregnancy. This is comparable with finding of Hasan R et al¹² in his study.

CONCLUSION

First trimester bleeding per vaginum has a great impact on pregnancy, fetomaternal outcome and psychology of the patient. It is not only associated with miscarriage but also with higher rate of pregnancy complications. Identifying the risk factors associated with first trimester bleeding per vagina; timely and appropriate management will be very helpful in reducing the complications like abortions, preterm birth, hypertensive disorders of pregnancy, antepartum and postpartum haemorrhage, etc. This will go a long way in reducing maternal and perinatal morbidity and mortality and overall pregnancy loss.

It is a significant occurrence and hence it is mandatory for all health care providers to understand the condition and aim at an early diagnosis and prompt management.

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