

Original Research

To determine the pregnancy outcome in patients with first trimester vaginal bleeding

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ABSTRACT:

Aim: To determine the pregnancy outcome in patients with first trimester vaginal bleeding. **Material and methods:** This prospective observational study was carried out in the department of Obstetrics and Gynecology, after taking the approval of the protocol review committee and institutional ethics committee. All women with vaginal bleeding in first trimester of pregnancy whose pregnancy was confirmed chemically and ultrasonologically were studied. After taking a written informed consent, patients were kept under surveillance until delivery and the consequence of pregnancy was evaluated by close observation on the process of pregnancy and prenatal care. Sonography was performed for all women in the 8-10 weeks interval. The women were visited every two weeks in the first 6 months of pregnancy, weekly in the 7th and 8th months and two times per week in the last month of pregnancy. The age of pregnancy at the time of bleeding, the volume of bleeding, the history of previous pregnancies, the co-existing diseases, the length and duration of pregnancy and the birth weight were recorded. **Results:** The mean (\pm SD) of birth weight was 3148.24 \pm 352.91 gram in babies of studied women. The mean (\pm SD) of gestational age at the end of pregnancy was 270.50 \pm 11.50 day in studied women. Table 1 summarizes the obstetrical characteristics and history of the patients. In our study, the age of the patients ranged from 18 to 40 years. The mean age of the patients was 29.54 \pm 2.76 years with a standard deviation of 4.37. It shows that majority of 47 (39.17%) patients had preterm labor, 24(20%) patients had placental abruption, 11(9.17%) patients had premature rupture of membrane, 5(4.16%) patients had intrauterine death, 3(2.50%) patients had intrauterine growth retardation and total 30(25%) patients did not have any complications. **Conclusion:** Considering the results of present study, the first trimester bleeding can be a predicting factor in the consequences of pregnancy and it is necessary to increase the knowledge of pregnant women in this regard for closer care.

Keywords: Pregnancy, Firsttrimester, Vaginal bleeding

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INTRODUCTION

The first trimester of pregnancy is a dynamic period that spans ovulation, fertilization, implantation and organogenesis. Vaginal bleed in early pregnancy represents a definite threat to developing embryo and constitutes a source of anxiety to both the patient and the clinician. Vaginal bleed during first trimester has been estimated to occur in 16 to 25% of all pregnant women.[1,2] A spectrum of causes for first trimester bleed has been identified ranging from threatened abortion, complete abortion, incomplete abortion, missed abortion, gestational trophoblastic disease, ectopic gestation. It is also one of the common causes of emergency admissions to the obstetrical department

and common reason for ultrasound in 1st trimester.[3] Hence complications occurring during this period pose a diagnostic and management challenge to the obstetrician. Meta-analysis indicate that vaginal bleeding is associated with two-fold increased risk of other complications during pregnancy.[4] In the first trimester pregnancies, complicated by bleed, less than 50% progress normally beyond 20 weeks of gestation, 10- 15% will be ectopic pregnancy, 0.2% will be a mole and 30% miscarry. Approximately 5% of women elect to terminate the pregnancy. About 15% of pregnancies are complicated by threatened miscarriage. Threatened abortion has been shown to be associated with an increased risk of poor obstetric

outcomes such as preterm labor, low birth weight and premature rupture of membranes. Although few studies have evaluated outcomes other than viability at term, most agree that adverse pregnancy outcome is associated with first trimester vaginal bleed. The outcome of ongoing pregnancies after first trimester bleeding is of relevance to women and obstetricians for planning antenatal care and clinical interventions in pregnancy. Definitive diagnosis of first trimester vaginal bleeding is necessary to save the life of the pregnant patient especially in the pathological conditions like ectopic, if not promptly diagnosed can lead to torrential bleed that can end the life of mothers. The important diagnostic action in patients with first trimester vaginal bleeding after confirmation of positive pregnancy test is transvaginal sonography to identify normal or pathological condition to provide early intervention. [5,6]. Hence this study was conducted to identify the risks associated with first trimester bleed which may facilitate decision making regarding mode, place and timing of delivery during management, which may improve maternal and neonatal outcome. The aim of the present study was to assess the maternal and perinatal outcome in pregnant women who present with first trimester vaginal bleeding.

MATERIAL AND METHODS

This prospective observational study was carried out in the department of Obstetrics and Gynecology, after taking the approval of the protocol review committee and institutional ethics committee. All women with vaginal bleeding in first trimester of pregnancy whose pregnancy was confirmed chemically and ultrasonologically were studied. Women with chronic medical complications including diabetes and hypertension and women with a history of infertility were excluded from the study and after taking a written informed consent, patients were kept under surveillance until delivery and the consequence of pregnancy was evaluated by close observation on the process of pregnancy and prenatal care. Sonography was performed for all women in the 8-10 weeks interval. The women were visited every two weeks in

the first 6 months of pregnancy, weekly in the 7th and 8th months and two times per week in the last month of pregnancy. The age of pregnancy at the time of bleeding, the volume of bleeding, the history of previous pregnancies, the co-existing diseases, the length and duration of pregnancy and the birth weight were recorded.

RESULTS

The mean (\pm SD) of birth weight was 3148.24 \pm 352.91 gram in babies of studied women. The mean (\pm SD) of gestational age at the end of pregnancy was 270.50 \pm 11.50 day in studied women. Table 1 summarizes the obstetrical characteristics and history of the patients. In our study, the age of the patients ranged from 18 to 40 years. The mean age of the patients was 29.54 \pm 2.76 years with a standard deviation of 4.37. The age range of 26 to 35 years was the most represented (61.67%) followed by 18 to 25 years (25.83) and more than 35 years (12.50). Most of the patients were primigravida (40%). Most of the patients had moderate bleeding volume (55%) followed by spotting (19.17%) and high bleeding volume in 31 patients (25.83%). 42(35%) patients had history of bleeding in previous pregnancies. Total of 14 (11.67%) patients had history of abortion.

Table 2 represents obstetrical complications in women with first trimester vaginal bleeding. It shows that majority of 47 (39.17%) patients had preterm labor, 24(20%) patients had placental abruption, 11(9.17%) patients had premature rupture of membrane, 5(4.16%) patients had intrauterine death, 3(2.50%) patients had intrauterine growth retardation and total 30(25%) patients did not have any complications.

Table 3 summarizes the pregnancy outcome in women with first trimester vaginal bleeding showing that most of the patients i.e 43(35.83%) had caesarean section, 29(24.17%) patients had normal vaginal deliveries, 16(13.33) patients had abortions, 10(8.33%) patients had Minute 5 APGAR score >7, 13(10.38%) patients had their babies admitted in NICU and 9(7.50%) patients suffered from termination of pregnancy.

Table 1: Obstetrical characteristics of studied women (n= 120)

Variables	Number n=120	Percentage (%)
Age group		
18-25	31	25.83
26-35	74	61.67
>35	15	12.50
Parity		
0	48	40.00
1	34	28.33
2	29	24.17
>2	9	7.50
Bleeding volume in current pregnancy		
Spotting	23	19.17
Moderate	66	55.00

High	31	25.83
History of bleeding in previous pregnancies		
Yes	42	35.00
History of abortion		
Yes	14	11.67

Table 2: Obstetrical complications in women with first trimester vaginal bleeding

Complications	Number of patients n=120	Percentage (%)
Preterm labor	47	39.17
Premature rupture of membrane	11	9.17
Placental abruption	24	20.00
Intrauterine death	5	4.16
Intrauterine growth retardation	3	2.50
No Complication	30	25.00

Table 3: Pregnancy outcome in women with first trimester vaginal bleeding

Outcome	Number of patients n=120	Percentage (%)
Abortion	16	13.33
Termination of pregnancy	9	7.50
Normal vaginal delivery	29	24.17
Caesarean section	43	35.83
Minute 5 APGAR score < 7	10	8.33
Admission in NICU	13	10.83

DISCUSSION

In this study, 65% of pregnant women with first trimester vaginal bleeding continued their pregnancy which shows more than half of these women terminated their pregnancy successfully. In the Snell et al.'s study it is demonstrated that vaginal bleeding occurs among 15-25% of pregnancies and half of them continue their pregnancy.[7,8] Three major reasons for first trimester bleeding are spontaneous abortion, ectopic pregnancy and trophoblastic diseases in pregnancy. In the study of Dogra et al., it is reported that the most common causes for first trimester bleeding are abortion and ectopic pregnancy and there were observable genetic disorders in more than 50% of spontaneous abortions.[9] In this study, the evaluation of uterus and pregnancy sac by ultrasound was considered as the first necessary action for diagnosis of the cause of bleeding. The studies of Deutchman et al. (2009) and Thorstensen et al. (2000) reported that in pregnancies with first trimester bleeding the most important diagnostic actions include transvaginal ultrasound and evaluating the rise of serum level of β HCG.[10,11] In the different studies such as Saraswat et al.'s and Siddiqui's, there has been demonstrated that women with bleeding in the first trimester of pregnancy, more frequently developed bleeding in the second and third trimesters due to the probability of placenta praevia, placenta disruption and bleeding with unknown place.[12,13] In some studies, it has been demonstrated that the probability of premature rupture of fetal membranes in the women with first trimester bleeding is about 2 to 4 times higher than others.[12] Several studies such as

Weiss et al.'s showed that abortion, premature delivery and placenta disruption are the most common complications of first trimester bleeding in the pregnancy which is in concordance with present study.[14] Saraswat et al. performed a systematic-review and demonstrated that first trimester bleeding has no effect on route of delivery.[12] But some other studies have shown that possibility of cesarean section in women with bleeding is more than that of others and this corresponds to the result of my study.

With regard to previous studies, it is apparent that due to several disorders of placenta in the pregnant women with first trimester bleeding, the length of pregnancy in these women is less and the possibility of premature delivery is more.[14] In other words, such pregnancies developed growth failure and newborn has low birth weight due to premature delivery.[15] Many studies agreed with low birth weight of newborns and Apgar of 5 minute less than 7 in pregnancies with first trimester bleeding but various results are reported about mortality rate of newborns.[15,16] In the study of Yasae et al. that was performed on 161 patients with vaginal bleeding during a period of 10 years in the Taleghani hospital, tehran, the average age of pregnancy was 16.3 weeks.[17] The limitation of this study is the determination of the intensity; amount and frequency of bleeding that appear to be effective factor at the end of pregnancy.

CONCLUSION

Considering the results of present study, the first trimester bleeding can be a predicting factor in the

consequences of pregnancy and it is necessary to increase the knowledge of pregnant women in this regard for closer care. Also, because the clinical interventions of attending doctor have important role in not only the continuance of pregnancy but also reducing the fetal complications in these high-risk pregnancies by precise management and planning.

REFERENCES

1. Kamble PD, Bava A, Shukla M, NandanvarYS. First trimester bleeding and pregnancy outcome. *Int J Reprod Contracept Obstet Gynecol.* 2017;6:1484-7.
2. Kavyashree HS, Rajeshwari K. A study on pregnancy outcome in patients with first trimester vaginal bleeding. *Int J Reprod Contracept Obstet Gynecol.* 2019;8:820-24. Doi: <https://doi.org/10.18203/2320-1770.ijrcog20161292>.
3. Zhila Amir Khani, Meisam Akhaghdoost Media Abedian, Gelareh Rabie, Salehi, maternal and perinatal outcome in pregnant women with first trimester vaginal bleeding. *J Fam Reproduct Health.* 2013;7(2):57-61.
4. Sotiriadis A, Makrydimas G, Papatheodorou S, Loannides JP. Expectant management of first trimester miscarriage. *Meta-analysis OBG* 2003; 105(5 pt 1):1104-13.
5. Deutchman M, Tubay AT, Turok D. First trimester bleeding. *Am Fam Physician.* 2009;79(11):985-94.
6. BalaN, Kaur N, Shifali A, Wakhloo A, Tabassum N.A study of maternal outcome in first trimester bleeding. *Int J Reprod Contracept Obstet Gynecol*2020;9:2104-12.
7. Amirkhani Zh, Akhlaghdoust M, Rabie Salehi G, Jangholi E, Sadeghi m, Ghenaat F, Et al. Relation between Fluoxetine and Menstrual Cycle Disorders. *Journal of Family and Reproductive Health* 2012; 6: 95-8.
8. Snell BJ. Assessment and Management of Bleeding in the First Trimester of Pregnancy. *Journal of Midwifery & Women's Health* 2009; 54: 483-91.
9. Dogra V, Paspulati RM, Bhatt S. First trimester bleeding evaluation. *Ultrasound Q* 2005;21:69- 85
10. Deutchman M, Tubay AT, Turok D. First trimester bleeding. *Am Fam Physician* 2009; 79: 985-94.
11. Thorstensen KA. Midwifery management of first trimester bleeding and early pregnancy loss. *J Midwifery Womens Health* 2000; 45: 481-97.
12. Saraswat L, Bhattacharya S, Maheshwari A, Bhattacharya S. Maternal and perinatal outcome in women with threatened miscarriage in the first trimester: a systematic review. *BJOG* 2010; 117: 245-57.
13. Siddiqui F, Kean L. Intrauterine fetal death. *Obstetrics, Gynaecology and Reproductive Medicine* 2009; 19:1-6.
14. Weiss JL, Malone FD, Emig D, Ball RH, Nyberg DA, Comstock CH, et al. Obesity, obstetric complications and cesarean delivery rate a population-based screening study. *Am J ObstetGynecol* 2004; 190: 1091-7.
15. Harlev A, Levy A, Zaulan Y, Koifman A, Mazor M, Wiznitzer A, et al. Idiopathic bleeding during the second half of pregnancy as a risk factor for adverse perinatal outcome. *J Matern Fetal Neonatal Med* 2008; 21: 331-5.
16. Riahinejad S, Motamedi N, Saadat N, Mostofiniya M, Toghiani A. Effect of Vaginal Bleeding in First Trimester of Pregnancy on Pregnancy Outcomes. *Journal of Isfahan Medical School* 2011; 156:1.
17. Yasae F, Ghorbani M. Incidence and outcome of bleeding in pregnant woman in 1370-1380. *Pajouheshdarpezeshki* 2006; 30: 227-9.