RESEARCH PAPER

Study Of Fetomaternal Outcome In Patients With Threatened Abortion..

Dr. Ofayra Farooq[1], Dr Nargis Choudhary[2], Dr. Farooq Ahmad Dar[3]

[1]ofayrafarooq@gmail.com, Post Graduate, Department of Obstetrics and Gynecology, GMC Srinagar, Kashmir
[2]Nargis.kassana@gmail.com, Post Graduate, Department of Obstetrics and Gynecology, GMC Srinagar, Kashmir
[3] fashahnaz657@gmail.com, Post Graduate, Department of Obstetrics and Gynecology, GMC Srinagar, Kashmir

***Corresponding Author:** Prof. Dr. Shagufta yasmeen Rather,
*shaguftarather@gmail.com Professor Dept. Of Obstetrics and Gynecology, GMC Srinagar, Kashmir.

Abstract

Background: Uterine bleeding in early pregnancy represents a definite threat to developing embryo and is directly proportional to the amount of bleeding. It is associated with an increased risk of poor obstetric and neonatal outcomes such as preterm labor, low birth weight, and premature rupture of membranes (PROM).

Aims and Objectives: This study aims to investigate the effect of the first trimester vaginal bleeding on maternal and perinatal outcomes.

Materials and Methods: This prospective observational study carried out in Gov't Medical College Srinagar, between January 2021 and June 2022. Here 200 patients with the first trimester vaginal bleeding were included in the study. Outcome of pregnancy was assessed in the form of obstetrical complications such as placenta previa, PROM, preterm labor, intrauterine fetal death, intrauterine growth restriction (IUGR), and neonatal outcomes such as prematurity, low birth weight, low appearance, pulse, grimace, activity, and respiration, requirement of newborn intensive care unit (NICU) admission, and perinatal death.

Results: Our study shows that 70(35%) out of 200 were primi gravida and rest 130 (65%) were multigravida. 41 % patients resulted in spontaneous abortion, and 59% continued their pregnancy to viable period. 48 out of 59 patients had preterm delivery, 9 out of 59 patients had antepartum hemorrhage. About 40(68%) delivered vaginally, 32% (19) underwent lower segment cesarean section.. Regarding neonatal outcome, 12% had early neonatal death, 22% needed NICU admission, 10% suffered from fetal distress, 20% were IUGR, and 47%had birth weight <2.5 kg.

Conclusion: The first trimester bleeding is a predicting factor for obstetric and perinatal complications during pregnancy.

Key words: Fetomaternal outcome; First trimester bleeding; Threatened abortion
How to cite this article: Farooq O, Choudhary N, Dar FA, Rather SY, Study Of Fetomaternal Outcome In Patients With Threatened Abortion. Int J Drug Deliv Technol. 2026;16(4s): 944-949; DOI: 10.25258/ijddt.16.4s.110

INTRODUCTION

Threatened abortion is a common complication of pregnancy occurring in 20-25% of ongoing pregnancies.. It is a condition where the process of abortion has started but has not progressed to a state from which recovery is impossible [1].

Clinical features [2]

1. Slight bleeding per vagina
2. Mild pain abdomen It is diagnosed on the basis of documented fetal cardiac activity on ultrasonography (USG) with history of vaginal bleeding in the presence of closed cervix.[3] USG may show subchorionic hemorrhage (SCH) of varying size, defined as a crescent shaped echo free area outlining the intact gestational sac.[4]

The four major sources of non-traumatic bleeding in early pregnancy are ectopic pregnancy, miscarriage (threatened, inevitable, incomplete or complete), implantation of pregnancy and cervical pathology [5].

Clinical vaginal bleeding in the first trimester is connected with an estimated 5.5–42.7% threat for successive thorough miscarriage [6,7]. Preterm delivery, low birth weight, intrauterine growth restriction, and neonatal intensive care unit (NICU) admission are just a few of the poor fetal outcomes that may result from bleeding during pregnancy, while poor maternal outcomes include an increased risk of abortion, pre-labor membrane rupture, and antepartum hemorrhage (APH).

AIM OF STUDY

In our study, we aimed to examine the pregnancy outcomes of the women with and without threatened abortion who were treated at LD Hospital , in order to,

*Author for Correspondence: shaguftayasmeenrather@gmail.com

by comparison, identify the effects of threatened on both prenatal and postnatal pregnancy outcomes.

EXCLUSION CRITERIA

Women with the following complications were omitted into the study. They consist of implantation bleeding, emergency patients who required instant surgical interventions such as incomplete and missed abortion, ectopic and molar pregnancies, abortifacient consumption, any local (cervical/vaginal) lesions/polyps, bleeding disorders, and pregnant women with chronic medical impediments like history of hypertension, diabetes, renal disorder, multifetal pregnancy, uterine fibroid , congenital uterine anomaly, cervical incompetence and pregnancy failure.

INCLUSION CRITERIA

All women of age 16 to 40 years with singleton live intrauterine gestation having regular menstruation with certain dates, either with subchorionic hemorrhage as seen on ultrasonography done in between 6 and 28 weeks of gestation, with or per vaginal bleeding or both attending the antenatal outpatient department were considered for the study.

MATERIALS AND METHODS

This prospective longitudinal study was conducted in the Department of Obstetrics and Gynecology, Lalla Ded Hospital from January 2021 to June 2022. We took total 200 patients, of which 100 were cases and 100 were controls. The cases and controls were matched as per their age and parity.

After proper counseling, informed consent was taken from each patient. The history, physical examination, and relevant laboratory investigations were done. The blood investigations included complete blood count, bleeding time, clotting time and platelets. Routine and microscopic examination of urine was done.

Management included bed rest up to 72 hours, folic acid supplementation, injection 17 α hydroxyprogesterone was given weekly up to 28 weeks. Follow up of the patient was done till spontaneous abortion or up to delivery of fetus.

Maternal outcomes were measured in terms of spontaneous abortion, antepartum hemorrhage (placenta abruption and placenta previa), pre-term labor and pre-term birth, pre-term pre-labor rupture of membranes, mode of delivery, retained placenta, post-partum hemorrhage. Perinatal outcomes were measured in terms of preterm birth, IUGR, low birth weight (<2.5 kg), birth asphyxia, neonatal intensive care unit (ICU) admission and perinatal death.

The collected information was entered in Microsoft Excel 2016. The data were analyzed using Statistical Package for Social Science (SPSS), version 16. The Chi-square test, Fisher exact test and Likelihood ratio were used to find out the significance of the study parameters. Univariate and multivariable logistic regression analyses were used to evaluate the association among the two groups with regards to specific pregnancy outcomes. . The p-value <0.05 was considered significant.

RESULTS

This study was a comparative prospective longitudinal study, carried over a period of 1.6 years. A total number of 200 patients, among which cases and controls were 100 each. Female patients with singleton pregnancy and in age group between 16-40 were studied.Study group was of comparable age and parity status.

Age	Cases	Controls
<20	10	10
21-25	22	22
26-30	26	26
31-35	25	25
>36	13	13

Residence	Cases	Controls
Urban	60	56
Rural	40	44

Majority of patients were residing in urban areas.

Parity	Cases	Controls
Primi	35	35
Multi	65	65
Gravida 2	20	30
Gravida 3 or >	45	35

Threatened abortions were more common in higher parity females ;69% vs 31%.

Previous obstetric outcome	Cases	Controls
Term delivery	36	54
Abortion	23	6
Both	6	5

Among the cases 45% were having history of abortions whereas only 11% of controls had history of abortion.

Mode of previous delivery	Cases	Controls
Previous vaginal delivery	26(62%)	40(68%)
Previous cesaerean delivery	16(38%)	19(32%)

Mode of management of previous abortion	Cases	Control
Spontaneous (including medical mx)	22(76%)	8(73%)
Dilatation and evacuation	7(24%)	3(27%)

Complications in the current pregnancy

Presenting complaint	Cases(No.)	%age
Vaginal bleeding	82	82
Spotting	16	16
Pain	2	2

Amount of bleeding		Duration of bleeding	
Mild	92	1-5 days	95
Moderate	8	>=6 days	5
Severe	0		

Most of the cases had mild bleeding(n=92%) and none had severe bleeding.

Placental localization	Cases	Controls
Placenta covering Os <28wk	20	5
Placenta previa >28wk	4	1

Among the cases low lying placenta <28wks and >28 wks, was found in 36% and 7% compared with 5% and 1% in controls , respectively. (relative risk ---;CI---)

Outcome of current pregnancy	Cases(no.)	Controls
Spontaneous abortion	41	5
Continued Pregnancy	59	95

Spontaneous abortion rate was more common in cases(n=41%) as compared to controls (n=5%) .
Among those who continued pregnancy, the mode of delivery was cesaerean in 32% cases as compared To controls(n=18%).

Mode of delivery	Cases	Controls
Vaginal delivery	40(68%)	78(82%)
Cesaerean section	19(32%)	17(18%)

Among the cases continuing pregnancy, 32% were terminated by cesearean as compared to 18% controls.

Timing of delivery	Cases	Controls
28-33 0-6wk	8	4
34-36 0-6 wk	40	8
>= 37wks	11	83

IUGR	12(20%)	2(2%)
IUD/ Stillbirths	7(12%)	1(1%)

NICU Admission	13(22%)	6(6%)
Severe birth asphyxia	6(10%)	1(1%)

Compared with controls, women presenting with threatened abortion were more likely to deliver prematurely, 81% compared with 13%, respectively (relative risk ----, 95% confidence interval [CI] -----).

PERINATAL OUTCOME

Babies born to 20% cases were IUGR as compared to controls (n=2%). Similarly, stillbirths present in 12% cases whileas in 1% controls. 13 % of neonates born to cases were admitted in NICU compared with controls where only 6% needed NICU admission. 10% of babies born to cases had severe birth asphyxia.

Weight of babies	Cases	Controls
<2 kgs	10	5
2.1-2.49kgs	18	8
>=2.5kgs	31	82

LBWs were found in 47% cases vs 14% controls.

MATERNAL OUTCOME

Outcome	Cases	Controls
Postpartum hemorrhage	10(17%)	3(3%)
PROM	14(24%)	3(3%)
Preterm PROM	8(14%)	1(1%)
Retained Placenta	3(5%)	0
Chorioamnionitis	2(3%)	0
Antepartum hemorrhage	6(11%)	2(2%)
Placental Abruption	3(5%)	1(1%)

17% of cases had PPH whereas only 3% controls had PPH. They were also more likely to have PROM and PPROM, 24% and 14% as compared with 3% and 1% controls , respectively (relative risk ---, 95% CI ----); 5% and 3% cases had retained placenta and chorioamnionitis respectively. Antepartum hemorrhage occurred in 11% cases as compared to 2% controls. Placental abruption in 5% cases compared with 1%controls. (relative risk ----, 95% CI ----);

Outcome in relation to weeks at which threatened abortion was diagnosed			
Weeks of gestation	Spontaneous abortion	Preterm delivery	Full term delivery
Upto 14wks	38(93%)	4(8%)	2(18%)
15-20wks	3(7%)	37 (77%)	4(36%)
21-28wks	0	7(15%)	5(46%)

Size of subchorionic hemorrhage with pregnancy outcomes			
Size of subchorionic hemorrhage	No of cases	Spontaneous abortion	Continuity of pregnancy
<4 cm^2	20	13(65%)	7(35%)
>=4 cm^2	8	5(62%)	3(38%)

Parity	Spontaneous abortion	Preterm delivery	Full term delivery
Primi	15	21	8
Multi	26	27	3

DISCUSSION

In our study, 41% spontaneous miscarriage was observed in patients with threatened abortion and 5% in the control group indicated that threatened abortion was the cautionary symptom for probable undesirable incidence. The observed incidence among threatened abortion pregnancies was comparable to the other outcomes from various documented research [8-10].

This study also indicates that women who have threatened abortions are at increased risks of later pregnancy complications; especially preterm delivery, shortened mean pregnancy period, lower gestational fetal weight and preterm rupture of membrane [11,12].

Similar to Johns J *et al*. study and prospective study done by dr Rashmi etal. Our results were similar to those reported before by Hossain *et al*. [13]. In Saraswat *et al*. study similar results were demonstrated for PPROM [14].

In our study, and consistent with the literature, among the pregnancies with threatened abortion, the rate of births before the 28th week and between the 28th and 32nd weeks was higher than in the control group [15,16,17,14,18,19].

the incidence of extremely LBW and very LBW were significantly higher in pregnancies with threatened abortion than in the control group. Several studies in the literature show similar results in terms of LBW [15, 21, 14, 19,21].

Other study reported that patients with threatened abortion are also at increased risk of placental abruption and IUGR (21,22).

Our study showed an increase risk of placenta previa in patients with threatened abortion. Das *et al.* reported an increased risk of low-lying placenta among patients with threatened abortion but reported no difference in placental location compared with control subjects by 36 weeks of gestation (23).

One study suggested that a statistical association is present with threatened abortion and risk for cesarean delivery (24).The amplified cesarean delivery rates among threatened abortion groups have been affected by the higher frequencies of placenta praevia and pre-term birth, which are mutual signs for cesarean section delivery. Wijesiriwardana et al 25 showed a higher incidence of elective caesarean delivery among threatened abortion group due to placenta previa and malpresentations.

Increase risk of threatened abortion was seen more in multi parous women in our study, similar to Rosen *et al*. study [26].

When outcome of pregnancy was analysed according to the gestational age at presentation, spontaneous abortions were more in those with <14 weeks of gestation. These findings correlate with the study by Funderburk et al, 27 .

In the present study, when outcome of pregnancy was compared with the amount of bleeding, the only statistically significant finding was the increased occurrence of spontaneous abortion in heavy bleeding group. Potential limitation of this study is that the severity of vaginal bleeding was based on a subjective description by the patient.

CONCLUSION

Threatened abortion is a crucial factor in predicting the outcomes of late pregnancy for both the mother and the fetus. Therefore, it is reasonable to classify these pregnancies as a high risk group for which thorough antenatal care should be given. According to the current study, women who have been threatened with abortion are more likely to experience a spontaneous loss and a poor pregnancy outcome. These relationships seem to be clinically and statistically significant. These findings can be utilized to reassure patients with threatened abortions because the prognosis is favorable generally. At the same time, medical professionals should be aware of the negative effects of threatened abortions and be vigilant for any indications of these issues.

BIBLIOGRAPHY

1. Hossain R, Harris T, Lohsoonthorn V, Williams M. Risk of preterm delivery in relation to vaginal bleeding in early pregnancy. Eur J Obstet Gynecol Reprod Bio. 2007; 135(2):158-163. doi.org/10.1016/j. ejogrb.2006.12.003.
2. Dadkhah F, Kashanian M, Eliasi GA. Comparison between the pregnancy outcome in women both with or without threatened abortion. Early Hum Dev. 2010; 86(3):193-196. doi:10.1016/j. earlhumdev.2010.02.005.
3. .Cunningham FG, Gant NF, Leveno KJ, Gilstrap LC III, Health JC, Wenstrom KD. 21st ed. Williams obstetrics. New York: McGraw-Hill, 2001. P. 866-67.
4. Jouppila P. Clinical consequences after ultrasonic diagnosis of intra-uterine hematoma in threatened abortion. J Clin Ultrasound 1985;13:107±11.
5. 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; 117:245257. doi:10.1111/j.1471-0528.2009.024 27.x.
6. Chung TK, Sahota DS, Lau TK, Mongelli JM, Spencer JA, Haines CJ. Threatened abortion: Prediction of viability based on signs and symptoms. Aust N Z J Obstet Gynaecol 1999;39:443-7. doi: 10.1111/j.1479-828x.1999.tb03129.x, PMID 10687760
7. Uerpairojkit B, Charoenvidhya D, Tannirandorn Y, Wacharaprechanont T, Manotaya S, Samritpradit P, *et al*. Sonographic findings in clinically diagnosed threatened abortion. J Med Assoc Thai 2001;84:661-5. PMID 11560215
8. Şükür YE, Göç G, Köse O, Açmaz G, Özmen B, Atabekoğlu CS, *et al*. The effects of subchorionic hematoma on pregnancy outcome in patients with threatened abortion. J Turk Ger Gynecol Assoc 2014;15:239-42. doi: 10.5152/jtgga.2014.14170, PMID 25584033
9. Sivasane DS, Daver RG. Study of pregnancy outcome of threatened abortion and its correlation with risk factors in a tertiary care hospital of Mumbai, India. Int J Rerprod Contracept Obstet Gynecol 2018;7:4598-603.
10. Agrawal S, Khoiwal S, Jayant K, Agarwal R. Predicting adverse maternal and perinatal outcome after threatened miscarriage. Open J Obstet Gynecol 2014;4:41251. doi: 10.4236/ojog.2014.4100175 ***Asian J Pharm Clin Res, Vol 16, Issue 8, 2023, 72-75 Mammen et al***
11. Gitau G, Liversedge H, Goffey D, Hawton A, Liversedge N, Taylor M. The influence of

maternal age on the outcomes of pregancies complicated by bleeding at less then 12 weeks. Acta Obstetricia et Gynecologica. 2009; 88(1):116-118. doi:10.1080/00016340802621005.
12. Johns J, Jauniaux E. Threatened miscarriage as a predictor of obstetric outcome. Obstet Gynecol. 2006; 107:845-850. doi:10.1097/01. AOG.000 0206186.91335.9a.
13. Hossain R, Harris T, Lohsoonthorn V, Williams M. Risk of preterm delivery in relation to vaginal bleeding in early pregnancy. Eur J Obstet Gynecol Reprod Bio. 2007; 135(2):158-163. doi.org/10.1016/j. ejogrb.2006.12.003
14. 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; 117:245257. doi:10.1111/j.1471-0528.2009.02427.x.
15. Ozdemirci S, Karahanoglu E, Esinler D, et al. Influence of threatenedmiscarriage on pregnancy and early postpartum period: a case–control
16. report. The Journal of Maternal-Fetal & Neonatal Medicine. 2014; 28(10):1186–1189, doi: 10.3109/14767058.2014.947577.
17. Weiss J, Malone F, Vidaver J, et al. Threatened abortion: a risk factor for poor pregnancy outcome, a population-based screening study.
18. American Journal of Obstetrics and Gynecology. 2004; 190(3): 745–750,doi: 10.1016/j.a jog.2003. 09.023.
19. Yakıştıran B, Yüce T, Söylemez F. First Trimester Bleeding and Pregnancy Outcomes: Case-Control Study. International Journal of Women's Health and Reproduction Sciences. 2015; 4(1): 4–7, doi: 10.15296/ijwhr.2016.02.
20. Evrenos AN, Cakir Gungor AN, Gulerman C, et al. Obstetric outcomes of patients with abortus imminens in the first trimester. Arch Gynecol
21. Obstet. 2014; 289(3): 499–504, doi: 10.1007/s00404-013-2979-5, indexed in Pubmed: 23912531.
22. Davari-Tanha F, Shariat M, Kaveh M, et al. Acta medica Iranica. 2008; 46(4).
23. Mulik V, Bethel J, Bhal K. A retrospective population-based study of primigravid women on the potential effect of threatened miscarriage
24. on obstetric outcome. Journal of Obstetrics and Gynaecology. 2009; 24(3): 249–253, doi: 10.1080/01443610410001660724.
25. Haddow JE, Knight GJ, Kloza EM, Palomaki GE. Alpha-fetoprotein, vaginal bleeding and pregnancy risk. Br J Obstet Gynaecol. 1986 Jun; 93(6):589-593.
26. Szekeres-Bartho J, Polgar B, Kelemen K, Par G, Szereday L. Progesterone mediated immunomodulation and anti-abortive effects: the role of progesterone induced blocking factor. Poster presentation. 10th World Congress on the Menopause,10-14 June 2002, Berlin.
27. Das AG, Gopalan S, Dhaliwal LK. Fetal growth and perinatal outcome of pregnancies continuing after threatened abortion. Aust N Z J Obstet Gynaecol. 1996
28. May;36(2):135-139.
29. Batzofin JH, Fielding WL, Friedman EA. Effect of vaginal bleeding in early pregnancy on outcome. Obstet Gynecol. 1984 Apr;63(4):515-518.
30. Wijesiriwardhana A, Bhattacharya S, Shetty A, Smith N. Obstetric outcome in women with threatened miscarriage in the first trimester. Obstet Gynaecol March 2006; 107(3): 557-62.
31. Rosen T, Kuczynski E, O'Neill LM, Funai EF, Lackwood CJ. Plasma levels of thrombin-antithrombin complexes predict preterm premature rupture of the fetal membranes. J Maternal- Fetal Med. 2001; 10(5):297-3 doi:10.1080/jmf.10.5.297.300.
32. Funderberk. SJ, Guthckie D, Meldrum D. Outcome of pregnancies complicated by early vaginal bleeding. BJOG 1980; 87: 100-5.