

# A Prospective Study to Determine the Pregnancy and Perinatal Outcome in Pregnant Women Presenting with First Trimester Vaginal Bleeding

Neha Vashisth

## ABSTRACT

**Introduction:** First trimester vaginal bleeding is a common symptom of pregnancy, complicating 16-25% of all pregnancies. If pregnancy continues poor maternal & fetal outcome may occur. Study aimed to determine the maternal outcome & perinatal outcome in patients presenting with first Trimester vaginal bleeding.

**Material and methods:** All pregnant patients visiting OPD or admitted in IPD with history of first Trimester vaginal bleeding with UPT positive & fulfilling inclusion criteria were taken into study. It was hospital based prospective observational study. All patient had complete examination at each visit. The patient was followed up in antenatal clinics & repeat USG scans were done as required. The amount of bleed noted at each visit. **RESULTS:** In present study incidence of first trimester bleeding was higher in age group of 30-35 years & primigravidae mother. The most common USG finding noted was IUGR incidence. Total 67.9% patients continued pregnancy beyond first trimester; of which 12.3% had preterm labour. Most common indication of LSCS mode of delivery was previous LSCS in 23.07% & fetal distress. In the present study of 81 patients total 22 patients had heavy bleeding, 59 had spotting. 26 patients had abortions, 5 had heavy bleeding and 21 had spotting. Among 33 full term delivery, 7 had heavy bleeding and 26 had spotting. Out of total 81 enrolled patient's abortion noted in 32.1%, fetal death seen in 2.5%.

**Conclusion:** According to results of present study, there is strong association between first trimester vaginal bleeding & adverse pregnancy outcome; 40.7% Full term live birth, 12.3% preterm birth, 12.3% IUGR & 32.1% abortions in present study

**Keywords:** Pregnancy and Perinatal Outcome, Pregnant Women, First Trimester Vaginal Bleeding

## INTRODUCTION

First trimester vaginal bleeding is a common symptom of pregnancy, complicating 16-25% of all pregnancies. Four major causes are miscarriage (threatened, inevitable, incomplete or complete), ectopic pregnancy, implantation bleeding of pregnancy & cervical pathology.<sup>1</sup> Outcome is likely to be affected by gestational age at bleeding, cause of bleeding & severity of bleeding.<sup>2</sup> If pregnancy continues poor maternal & fetal outcome may occur. It is also known that maternal age & systemic diseases increase the risk of abortus imminens. Emerging evidence suggests that it may be associated with poor fetal & maternal outcomes. Further it is hypothesized that first trimester bleeding may indicate an

underlying placental dysfunction, which may manifest later in pregnancy causing adverse outcomes such as increased risk of pre-eclamptic toxemias, preterm delivery, prelabour rupture of membranes (PROM), & IUGR.<sup>3</sup> Abortus imminens is diagnosed as first trimester vaginal bleeding with closed cervix & confirmed with fetal heart rate on Ultrasound.<sup>4,5</sup> Bleeding per vaginam in the first trimester is one of the most common obstetric problem. It is also one of the commonest causes for the majority of the emergency admissions & also the common reason for Ultrasound examination in first trimester. Approximately 1/3<sup>rd</sup> of first trimester bleeding happens in pregnancies that are otherwise normal.<sup>6</sup> In addition, no anatomical cause can be established in the vast majority of pregnancies that are complicated by vaginal bleeding.<sup>7</sup> Half of the women who experience first trimester vaginal bleeding will continue their pregnancies, & other half will experience an abortion.<sup>8</sup> Meta-analysis indicate that vaginal bleeding is associated with a twofold increased risk of other complication during that pregnancy.<sup>9</sup> Vaginal bleeding after confirmation with apposite pregnancy test requires further assessment in order to identify normal or abnormal development of the pregnancy or pathologic condition that requires intervention.<sup>10,11</sup> Women with first trimester bleeding in first pregnancy have an increased risk of complications later in first pregnancy & of recurrence of first trimester bleeding & other complications in the second pregnancy.<sup>12</sup> Outcome is likely to be affected by the gestation at bleeding, cause of bleeding, severity of bleeding & many other factors.<sup>13</sup> Threatened miscarriage is diagnosed on the basis of documented fetal cardiac activity on ultrasound with a history of vaginal bleeding in presence of closed cervix.<sup>14</sup> In majority of cases of threatened miscarriages, the bleeding is of unknown origin & usually slight. Ultrasonography confirms the diagnosis. It must reveal the fetus to show signs of life.<sup>15</sup> USG may show subchorionic hematoma defined as a crescent shaped echo free area between the chorionic

Senior Resident, Department of Obstetrics & Gynecology, JNU Medical College, Jaipur, India

**Corresponding author:** Dr Neha Vashisth, Senior Resident, Department of Obstetrics & Gynecology, JNU Medical College, Jaipur, India

**How to cite this article:** Vashisth N. A prospective study to determine the pregnancy and perinatal outcome in pregnant women presenting with first trimester vaginal bleeding. International Journal of Contemporary Medical Research 2020;7(12):L11-L15.

**DOI:** <http://dx.doi.org/10.21276/ijcmr.2020.7.12.20>



membrane & the myometrium.<sup>16</sup> In ongoing spontaneous pregnancies complicated by first trimester, lower birth weight has been found, but a direct relationship could not be demonstrated.<sup>17</sup> First trimester bleeding due to threatened abortion increases the rate of spontaneous preterm delivery, PROM & placental abruption, & decreases neonatal weight. Therefore, threatened abortion indicates high risk pregnancy & warrants more serious prenatal care.<sup>18</sup> Vaginal bleeding is associated with two-fold increased risk of other complications during that pregnancy.<sup>19</sup> Ultrasonography is a safe & non-invasive diagnostic technique, it should be done as a routine investigation in all patients with complain of bleeding p/v in first trimester. It gives clues of viability or non-viability of pregnancy, which can be terminated without undue delay.<sup>20</sup> Study aimed to determine the maternal outcome & perinatal outcome in patients presenting with first Trimester vaginal bleeding.

## MATERIAL AND METHODS

The study was conducted in tertiary care hospital, Kokilaben Dhirubhai Ambani Hospital situated in Mumbai. All pregnant patients visiting OPD or admitted in IPD with history of first Trimester vaginal bleeding with UPT positive & fulfilling inclusion criteria were taken into study. It was hospital based prospective observational study. Based on the literature<sup>21</sup> it was found that 70% of pregnant women with first trimester vaginal bleeding continue their pregnancy. With a 10% allowable variation, the sample size at 95% confidence level 81 patients were enrolled in the study. Study Duration was between September 2017 to May 2018.

### Inclusion Criteria

Any pregnant women with UPT positive presenting or history of bleed per vaginum in 1<sup>st</sup> trimester.  
Single or multiple viable pregnancy confirmed on ultrasound.  
Absence of congenital uterine anomaly or uterine fibroid.

### Exclusion Criteria

Any pregnant women presenting with bleeding per vaginum after 12 weeks.  
Pregnant females with history of trauma or surgery in present pregnancy  
Any biochemical pregnancy

### Methodology

Antenatal patient (fulfilling inclusion criteria) visiting OPD or admitted in IPD, department of obstetrics & gynecology at Kokilaben hospital in Mumbai between the study period were studied. All patient had complete examination (general, physical & Gynecological) at each visit. The patient was followed up in antenatal clinics & repeat USG scans were done as required. The amount of bleed noted at each visit. If spotting found, it was considered as light, if bleeding similar or more than menstrual bleed, it was considered heavy. Ultrasonogram was performed for diagnosis. Patient with threatened miscarriage were managed conservatively as per the protocol, followed up prospectively at antenatal period to study outcomes.

### Measurement of outcome

Maternal outcome was measured as percentage of 1<sup>st</sup> trimester outcome & outcome measurement in patient with continued pregnancy beyond first trimester and Neonatal outcome.

## STATISTICAL ANALYSIS

The quantitative data was represented as their mean  $\pm$  SD. The t-test was used for analysing quantitative data, or else non-parametric data was analysed by Mann Whitney test and categorical data was analysed by using chi-square test. All analysis was carried out by using SPSS software version 21.

## RESULTS

In present study incidence of first trimester bleeding was higher in age group of 30-35 years (51.9%), n=42 (TABLE 1). In present study, out of 81 patients enrolled 51.9% (n=42) were primigravidae & 48.1% (n=39) were multigravidae (TABLE 2). In present study 53.1% (n=43) of patient with first trimester bleeding had irregular menstrual cycle. In present study 64.2% (n=52) who presented with first trimester bleeding were working supported mothers. In present study first trimester vaginal bleeding incidence higher in the BMI was group >35, 60.5% (n=49). In present study 90.1% (n=73) of patient presenting with first trimester bleeding had Rh +ve blood group. In present study (TABLE 3), 71.6% (n=58) had spontaneous conception whereas 28.4% (n=23) had assisted conception. In present study out of 81 patients with first trimester vaginal bleeding 72.8% (n=59) had spotting whereas 27.2% (n=22) had heavy bleeding. In present study out of 81 patients with first trimester bleeding 64.2% (n=52) had multiple episodes of bleeding & 60.5% (n=49) had altered bleeding whereas 39.5% (n= 32) had fresh bleeding (TABLE 4). In present study incidence of first trimester bleeding in previous pregnancies was 27.2% (n=22), (TABLE 5). In present study 37% (28/81) of the threatened abortion had diabetes & thyroid disorder as leading disorder with incidence of 16% each (n=13). Among 81 patients with bleeding in first trimester, majority 91.4% (n=74) had no surgery in the past. Among personal history, smoking was most common addiction noted in enrolled patients with incidence of 9.9% (n=8) followed by alcohol addiction

Age group (yrs)	N	%
<30	25	30.9%
30-35	42	51.9%
36-40	12	14.8%
> 40	2	2.5%
Total	81	100.0%

**Table-1:** Correlation of age group to the bleeding in first trimester

Parity	N	%
Primi	42	51.9%
Multi	39	48.1%
Total	81	100.0%

**Table-2:** Correlation of the incidence of first trimester bleeding with the parity

Mode of conception in present Pregnancy	N	%
Spontaneous	58	71.6%
Assisted	23	28.4%
Total	81	100.0%

**Table-3:** Correlation of mode of conception in present pregnancy with bleeding in first trimester in present pregnancy

History of Bleeding		N	%
Frequency of Bleeding	Once	29	35.8%
	More than Once	52	64.2%
Type of Bleeding	Brownish	49	60.4%
	Fresh	32	39.5%

**Table-4:** Correlation to frequency of bleeding

History of Previous Pregnancy		N	%
Mode of Conception	IUI	3	3.7%
	IVF	5	6.2%
	Spontaneous	31	38.3%
	Not applicable	42	51.9%
Missed Abortion		3	3.7%
Bleeding in First Term		22	27.2%
Anencephaly		1	1.2%
Oligohydraminos		1	1.2%
Placenta Previa		1	1.2%
PPROM		1	1.2%

**Table-5:** Correlation of significant past events with bleeding in first trimester in present pregnancy

Pregnancy Outcomes	N	%
Abortion	26	32.1%
PPROM	1	1.2%
PROM	5	6.2%
PIH	8	9.9%
APH	7	8.6%
None	34	42.0%

**Table-6:** Analysis of the pregnancy outcome with bleeding in first trimester

Parity	N	%
Primi	42	51.9%
Multi	39	48.1%
Total	81	100.0%

**Table-7:** Correlation of the incidence of first trimester bleeding with the parity

Final Outcome	N	%
Abortion	26	32.1%
Fetal Death	2	2.5%
Full term Delivery (Normal/ LSCS)	33	40.7%
IUGR	10	12.3%
Pre-term delivery	10	12.3%
Total	81	100.0%

**Table-8:** Analysis of the final outcome with bleeding in first trimester

6.2%(n=5). The most common USG finding noted was IUGR with incidence of 32.1%. 5 patients (6.2%) required uterine curettage, blood transfusion was required 2 patients with severe bleeding. Out of enrolled Patients incidence of 81 abortion was 32.1% (n=26). Out of total 81 enrolled patients abortion noted in 32.1% (n=26), fetal death seen in 2.5% (n=2) (TABLE 6). The incidence of first trimester bleeding seen in primigravidae was 51.9% (TABLE 7). Total 67.9% (55/81) patients continued pregnancy beyond first trimester; of which 12.3% (n=10) had preterm labour. Most common indication of LSCS mode of delivery was previous LSCS in 23.07%(n=12) & fetal distress. In the present study of 81 patients total 22 patients had heavy bleeding and 59 had spotting. 26 patients had abortions, 5 had heavy bleeding and 21 had spotting. Among 33 full term delivery, 7 had heavy bleeding and 26 had spotting (TABLE 8)

## DISCUSSION

The Present study is a prospective study of 81 cases who had bleeding per vaginum in first trimester or had history of bleeding in first trimester. In present study most of the subjects enrolled were in age group of 30-35 years (51.9%), n=42. The Mean age in present study was 33.4 years which is in harmony with Amirkhani et al study<sup>21</sup> which had 53% patients between age group of 25-34 years and contrast to previous study which had most subjects under 20 years of age (Jigna et. al<sup>2</sup>), and Kamble et al<sup>22</sup> which had 52% in the age group of 21-30 years. In present study, out of 81 patients enrolled 51.9% (n=42) were primigravidae & 48.1% (n=39) were multigravidae which is almost similar to Sarmalkar et al study<sup>36</sup> who had 52% primigravida and 48%. Amirkhani et al<sup>21</sup> reported almost same findings with 56.7% were in primigravida and 48% were multigravida. In contrast to the present study Kamble et al<sup>22</sup> reported 64% were primigravida and 36% were multigravida. Most of the patients enrolled in our study had irregular menstrual cycle 53.1% (n=43) & 46.9% (n=38) had regular menstrual bleeding. Previous no study shows any correlation with regularity or irregularity of menstrual cycle. In present study 90.1% (n=73) of patient presenting with first trimester bleeding had Rh +ve blood group. In present study 71.6% (n=58) had spontaneous conception whereas 28.4%(n=23) had assisted conception. In present study out of 81 patients with first trimester bleeding 64.2%(n=52) had multiple episodes of bleeding & 60.5% (n=49) had altered bleeding whereas 39.5% (n= 32) had fresh bleeding. In present study among the Past medical disorder history was present in 37% of enrolled patients where diabetes & thyroid disorder were leading disorders with incidence of 16% each (n=13). Among the previous surgical history, majority 91.4% (n=74) had no surgical history in previous conceptions. Among personal history, smoking was most common addiction noted in enrolled patients with incidence of 9.9% (n=8) followed by alcohol addiction 6.2%(n=5). Reem Hasan et al<sup>37</sup> observed BMI, smoking, alcohol were not predictors of bleeding. In present study incidence of first trimester bleeding in previous pregnancies was 27.2% (n=22) and missed abortion in previous pregnancy was 3.7%

which in harmony with the study done by Amirkhani et al<sup>21</sup> had 33.3% patients with history of bleeding in first trimester and 15% had abortions in previous pregnancy.

In the present study, out of 81 patients 72.8% (n=59) whereas 27.2% (n=22) had spotting which was in harmony with the studies done by Jigna et al<sup>2</sup> (77% with spotting and 23% with heavy bleeding and Kamble PD et al<sup>22</sup> who had 83.2% with spotting and 16.8% had heavy bleeding. On the contrary Amirkhani et al<sup>21</sup> study 96.6% patients had moderate to severe bleeding & 3.3% had spotting. In present study first trimester vaginal bleeding incidence was higher in the BMI group >35, 60.5% (n=49) in contrast to previous study which showed no correlation between BMI and bleeding in first trimester. Reem Hasan et al<sup>37</sup> observed BMI, smoking, alcohol were not predictors of bleeding. In present study 64.2% (n=52) who presented with first trimester bleeding were working supported mothers and 35.8% were housewife supported. Previous no study has shown any correlation between occupation. Reem Hasan et al<sup>37</sup> observed BMI, smoking, alcohol were not predictors of bleeding. The most common USG finding noted was IUGR with incidence of 32.1% (n=26) followed by missed abortion 25.9% (n=21) which was different from previous studies which had 40.8% missed abortion (Kamble P D et al<sup>22</sup>) and 9.9% had complete abortion and 7.3% had missed abortion. In Patel NG et al<sup>34</sup> observed normal growth in USG at the end of first trimester in 45% of cases, missed abortions in 7% of cases, ectopic pregnancy in 8% of cases. 5 (6.2%) patients who had incomplete abortion and retained products after the medical management of missed abortion required uterine curettage, blood transfusion was required in 2 patients with severe bleeding after ruptured ectopic pregnancy, tocolytics was not required & conservative management done in 55 patients (67.9%). Out of 81 enrolled Patients incidence of abortion was 32.1% (n=26) & number of patients progressed beyond first trimester were 67.9% (n=55) which was similar Priyanka Rai et al<sup>36</sup> study showed over all 34% cases had abortion and on the contrary Kamble PD et al<sup>22</sup> 84% aborted. Out of remaining 55 patients beyond abortions, PIH had maximum incidence 9.9% (n=8). Patel NG et al<sup>34</sup> no maternal complication seen in 57.8% cases, 36% aborted, PPRM seen in 18.7% cases, PIH seen in 6.2%, placental abruption seen in 7.8% cases. Priyanka Rai et al<sup>38</sup> study showed over all 34% cases with vaginal bleeding aborted & rest 66% continued beyond 20 weeks of gestation. Kamble PD et al<sup>22</sup> study showed 6.75% had PROM, 5.5% had PIH, 1.8% had APH & 84% aborted. Amirkhani et al<sup>21</sup> study reported 8.3% had PROM & 13.3% had placental abruption. Lykke et al<sup>14</sup> noted PPRM in 19.1% cases & PIH in 4% cases. Davari-tanha study<sup>39</sup> observed placental abruption in 5.7% cases, PPRM in 27.5% & PIH in 4.6% cases.

## CONCLUSION

Patients who had bleeding in first trimester are at increased risk of adverse maternal and perinatal outcome. According to results of present study, there is strong association between first trimester vaginal bleeding & adverse pregnancy

outcome: 40.7% Full term live birth, 12.3% preterm birth, 12.3% IUGR & 32.1% abortions in present study. Considering the results of present study, first trimester bleeding can be a predicting factor in terms of mother and infant consequences of pregnancy and it is necessary to increase the knowledge of pregnant women in this regard for closest care.

## REFERENCES

1. Yakistiran B, Yuce T, Soylemez F. First Trimester bleeding & pregnancy outcomes: case-control study. *Int J Women Health Reproductive Sci.* 2016; 4:4-7.
2. JignaJasoliya, SaralBhatia. Study of fetal outcome in cases of bleeding per vaginam in first trimester of pregnancy. *International Journal of Science & Research,* 2017;6;1543-1545
3. Kutteh W, Carr B. Diagnosis & management of recurrent pregnancy loss in Female Patient Q 1993;18:85-98.
4. Chhabra S. Perinatal outcome in cases with bleeding during first & early second trimester. *Int J Med Health Biomed Bioengin Pharm Engin.* 2014;8;61-6.
5. S. Chhabra, C. Tickoo, P. Kalra. Perinatal outcome in cases with bleeding during first & early second trimester. *International Journal of Medical, Health, Biomedical, Bioengineering & Pharmaceutical Engineering.* 2014; 8;1-6
6. Aggarwal S. Predicting adverse maternal & perinatal outcome after threatened miscarriage. *Open J Obstet Gynaecol.* 2014;4:1-7.
7. Yazigi R, Saunders E, Gat M. Hormonal therapy during pregnancy. *Contemp Ob Gyn.* 1991;61-78.
8. Williams MA, Mittendorf R, Lieberman E, Monson RR. Adverse infant outcomes associated with first trimester vaginal bleeding. *Obstet Gynecol.* 1991;78:14-8
9. Saraswat L, Bhattacharya S, Maheshwari A, Bhattacharya S. Maternal & perinatal outcome in women with threatened miscarriage in the first trimester in the first trimester: A systematic review. *BJOG.* 2010;117:245-257.
10. 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: 158-163.
11. Ananath C, Savitz D. Vaginal bleeding & adverse reproductive outcomes: a metaanalysis. *Paediatr Perinat Epidemiol* 1994; 8:62-78.
12. Snell BJ. Assessment & management of bleeding in first trimester of pregnancy. *Journal of midwifery & women's Health* 2009; 54:483-91.
13. Dogra V, Paspulati RM, Bhatt S. First Trimester bleeding evaluation. *Ultrasound Q* 2005; 21:69-85.
14. Lykke JA, Dideriksen KL. First trimester vaginal bleeding & complications later in pregnancy. *Obstet Gynecol.* 2010;115: 935-44.
15. Cunningham F.G., Gant N.F., Leveno K.J., et al. (2001) editors. *William's obstetrics.* 21<sup>st</sup> Edition, McGraw-Hill, New York.
16. Park, I.Y., Park, C.H., Lee, G. et al. Prognosis of threatened abortion by embryonic/fetal heart beat rate. *Ultrasound in medicine & biology* 2006;32:264.
17. Mnaton, M & Pedersen, J.F. Intrauterine Haematoma: An ultrasonic study of threatened abortion. *British Journal*

- of Obstetrics & Gynecology, 1981;88:47-51.
18. Dadkhah F, Kashanian M, Eliasi G. A Comparison between the pregnancy outcome in women both with or without threatened abortion. *Early Hum Dev.* 2010;86:193-6.
  19. Petra De Sutter, Julie Bontinck, Valerie Schutysers, Josiane der Elst, Jan Gerris, Marc Dhont. First Trimester bleeding & Pregnancy outcome in singletons after assisted reproduction. *Human Reproduction* 2006;21:1907-1911.
  20. Rai P, Kumari G, Kumari K, Jaiswal D. Evaluation of perinatal outcome in women presented with first trimester vaginal bleeding: Our experience. *Int J Reprod Contracept Obstet Gynecol* 2017; 6:829-32.
  21. Zhila Amirkhani, Meisam Akhalghdoust, Media Abedian, Gelareh Rabie Salehi, Nesa Zarbati, Maryam Mogharehabet, et al. Maternal and Perinatal Outcomes in Pregnant Women with First Trimester Vaginal Bleeding. *J Family Reprod Health* 2013;7:57-61.
  22. Kamble PD, Bava A, Shukla M, Nandanvar YS. First trimester bleeding and pregnancy outcome. *Int. J Reprod Contracept Obstet Gynecol* 2017; 6:1487-7
  23. Betul Yakistriran, Tuncay Yuce, Feride Soy lemez. First Trimester Bleeding and Pregnancy Outcomes: Case – Control Study. *Int.J of Women' Health and Reproduction Sciences* 2016;4:4-7
  24. Copte J, Bouyer J, Germain E, et al. Recent declining trend in ectopic pregnancy in France; evidence of two clinico epidemiologic entities. *Fertil Steril* 2000; 74: 881-3.
  25. Barnhart KT, Katz I, Hummel A, et al. Presumed diagnosis of ectopic pregnancy. *Obstet Gynaecol* 2002; 100: 505-8.
  26. Bangsgaard N, Lund C, Ottesen B, et al. Improved fertility following conservative surgical treatment of ectopic pregnancy. *BJOG* 2003; 110: 765- 6.
  27. Morlock R J, Lafata J E, Eisenstein D. Cost effectiveness of single dose methotrexate compared with laparoscopic treatment of ectopic pregnancy. *Obstet Gynaecol* 2000; 95: 407-9.
  28. Lipscomb GH, Puckett KJ, Bran D, et al. Management of separation pain after single dose methotrexate therapy for ectopic pregnancy. *Obstet Gynaecol* 1999; 93: 590-2.
  29. Lipscomb GH, Meyer NL, Flynn DE, et al. Oral Methotrexate for treatment of ectopic pregnancy. *Am J Obstet Gynaecol* 2002; 186: 1192-5.
  30. Weiss JL, Malone FD, Vidaver J, et al. Threatened abortion: A risk factor for poor pregnancy outcome, a population-based screening study. *Am J Obstet Gynaecol* 2004; 190: 745-8.
  31. Blohm F, Friden B, et al. Expectant management of first trimester miscarriage in clinical practice. *Acta Obstet Gynaecol Scand* 2003; 82: 654-6.
  32. Luise C, Jermy K, May C, et al. Outcome of expectant management of spontaneous first trimester miscarriage; observational study. *BMJ* 2002; 324: 873-6.
  33. American College of Obstetricians & Gynaecologists: Bulletin # 53 Diagnosis and treatment of gestational trophoblastic disease. *Obstet Gynaecol* 2004; 103: 1365-7.
  34. Patel NG, Patel MS, Shah SR, Jani SK, Patel JA, Shah JU. Study of outcome of pregnancy in patients with first –trimester bleeding per vaginam. *Int J Adv Med* 2014; 1:230-3
  35. Manonamani, Nandhini. A study on Pregnancy outcome in women with First Trimester Bleeding per vaginam. *IOSR Journal of dental & medical science.* 2016; 15:85-87.
  36. Sarmalkar MS, Singh S, Nayak AH. Maternal & perinatal outcome in women with threatened abortion in first trimester. *Int J Reprod Contracept Obstet Gynecol* 2016; 5:1438-45.
  37. Remm H, Donna D, Amya H, Andrew F, Olshan, Michele L, Johnson F, Katherine E. Pattern & predictors of vaginal bleeding in first trimester of pregnancy. *Ann Epidemiol.* 2010;20:524-531.
  38. Priyanka R, Girija K, Kalpana K, Deepshikha J. Evaluation of perinatal outcome in women presented with first trimester vaginal bleeding: Our Experience. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology.* 2017; 6:829-832.
  39. Davari-Tanha F, shariat M, Kaaveh M, Ebrahimi M, Javalvand S. Threatened abortion: a risk factor for poor pregnancy outcome. *Acta Med Iran.* 2008;46:314-20.

**Source of Support:** Nil; **Conflict of Interest:** None

**Submitted:** 13-06-2020; **Accepted:** 05-07-2020; **Published:** 31-12-2020