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ORIGINAL ARTICLE

Pregnancy Outcome in First Trimester Bleed

HAJRA SAYYAD[1], HUMAIRA JADOON[2], MARIA GUL[3], MARYAM BIBI[4], SALMA REHMAN[5], SEEMAB ZAFAR[6]
[1]*Resident OBs and Gynae, Gynae A Ward Ayub Teaching Hospital Abbotabad*
[2]*Assistant Professor Ayub Teaching Hospital Abbottabad*
[3]*Trainee Medical Officer, Ayub Teaching Hospital Abbottabad*
[4]*Trainee Medical Officer Gynae Obs, Ayub Teaching Hospital Abbottabad*
[5]*PGR III GBW, Ayub Teaching Hospital Abbottabad*
[6]*Assistant Professor, AJK Medical College, Abbas Institute of Medical Sciences Muzaffarabad*
Correspondence to: Humaira Jadoon, Email: drmaira@hotmail.com

ABSTRACT

Background: There is disagreement on the outcome of vaginal bleeding during the first trimester. The purpose of this study was to ascertain the perinatal and maternal outcome for patients who presenting with vaginal bleeding during the first trimester.

Methods: Over the course of a year, 1007 women with vaginal bleeding in the first trimester were included in this prospective observational study at a tertiary care hospital in Peshawar. The diagnosis was confirmed by a USG and a thorough history. All of these patients had their outcomes assessed, including spontaneous, threatened abortions, incomplete, and complete abortions, subchorionic hematoma, intrauterine foetal death, missed abortions, bleeding in the second and third trimesters, premature rupture of membranes, intra-uterine growth restriction, and preterm births.

Results: 1007 individuals with 11835 confinements had vaginal bleeding in first trimester. The age range of 21 to 30 years saw the highest occurrence (52.3%). First trimester haemorrhage was detected in 63.9 percent of primigravidas compared to 36.1 percent of multigravidas. It was shown that only 7% of patients who attended after 10 weeks had an abortion, compared to 76.9% of patients who presented before 6 weeks. In the 163 patients who continued to be pregnant after experiencing vaginal bleeding in first trimester, 1.8 percent had an abortion in the 2nd trimester, and 15.3% experienced premature labour. 6.75 percent of pregnancies end prematurely, and 1.8% experience antepartum haemorrhage.

Conclusions: First trimester vaginal bleeding foretells ancillary maternal and foetal difficulties, according to the findings of the current study. Additionally, as clinical intervention plays a crucial part in preserving pregnancy and lowering foetal problems, careful supervision and planning by the doctor are crucial.

Keywords: First trimester bleeding, Abortions, Threatened abortion, Preterm Labor,

INTRODUCTION

The vaginal bleeding during the first trimester, which complicates 16–25% of all pregnancies, is a frequent pregnancy symptom. The four main causes are the miscarriage (inevitable, threatened, complete, or incomplete), implantation haemorrhage of pregnancy, ectopic pregnancy, and cervical pathology.[1] This causes stress for the mother, her family, and the caregivers. The reason for bleeding, the gestational age at bleeding and the intensity of the bleeding are likely to have an impact on the outcome.[2] Physical and pelvic exams should be performed following a thorough history-taking procedure, and the diagnosis and therapy strategy are then determined with the aid of imaging modalities.[3]

First trimester bleeding during pregnancy results in pregnancy loss in more than 50% of cases.[4] Pre-term premature membrane breach (PPROM), preterm delivery, placental abruption, intra uterine growth restriction (IUGR), and pre-eclampsia are only a few of the terrible outcomes that could happen to the mother and the foetus if the pregnancy continues.[5] The likelihood of an abortus imminent is also known to increase with maternal age, the systemic disorders such as hypothyroidism, diabetes mellitus, infertility treatments, maternal weight, thrombophilia, and uterine anatomical abnormalities.[6,7] Recent data hint that it might be linked to poor mother and foetal outcomes.[8,9] Additionally, it is hypothesised that the first-trimester bleeding may be the sign of underlying placental dysfunction.[9,10] If this dysfunction materialises later in pregnancy, it may have negative effects on the baby, including an high risk of the preeclamptic toxaemias, pre-term labour, pre-labour rupture of the membranes (PROM), and intrauterine growth restriction (IUGR). [5,11]

This study performed to determine impact of the vaginal bleeding during the first trimester on mother and the prenatal outcomes.

METHODS

In the current prospective observational study, 1007 patients with the 1st trimester bleeding who are hospitalised to Obstetrics and Gynaecology department at a tertiary care hospital in Peshawar were examined. At the initial visit, every patient underwent a thorough physical, gynaecological, and general examination. The patients received routine follow-up care in the prenatal clinic, and additional ultrasound scans are performed as needed. Patients with the sub-chorionic hematoma underwent regular weekly scans till the hematoma resolved.

The other requirements for eligibility were a normal BMI (body mass index), certainty of the dates, a history of the regular cycles, the absence of the cervical abnormalities, and the single viable pregnancy with the ultrasound confirmation. At each visit, the amount of bleeding was recorded.

Women who were expecting were not included in the study if they had a history of cervical incompetence, uterine fibroids, congenital uterine anomalies, syphilis, diabetes mellitus, thrombophilia, smoking, a previous congenital malformation in the children, recurrent miscarriage, the history of surgery or trauma during current pregnancy, or local cervical pathology like cervical polyps or erosions.

Spotting was regarded as light if it was discovered. It was termed heavy bleeding if it exceeded the patients' monthly bleeding or was comparable. The emergency investigations were referred and check the curettage was carried out in the patients with excessive bleeding and the presence of the foetal products in vagina and cervix (the incomplete abortion). An ultrasonogram was conducted to provide a diagnosis, determine the gestational age, and look for subchorionic hematomas. The diagnosis of threatened, complete, missed, and inevitable abortions was supported by ultrasonography. Supplementation of folic acid, the tablet micronized progesterone (200 mg) BD, and full bed rest were used to treat patients who were at risk for miscarriage until 48 hours after the bleeding stopped. These patients were enrolled, prospectively tracked at the prenatal clinics, and delivered at same hospital.

RESULTS

In the current study, 8.5 percent of participants experienced first trimester haemorrhage. The study group consisted of 1007 women who experienced first trimester haemorrhage, of whom 84% had abortions and 16% had live births.

In the study, 70 percent of the pregnant women who experienced bleeding of vagina in the first trimester continued to

carry their babies.[12] In a different study, it was discovered that 15–25% of pregnancies experienced vaginal bleeding, and 50% of those pregnancies went on to term.

Table 1: Age parameters

Age	Continued pregnancy patients	Aborted patients	Percentage	Total
greater than 35	8	26	3.4	34
less than 20	49	257	30.4	306
31-35	77	63	13.9	140
21-30	29	498	52.3	527
Total	163 (16.10%)	844 (83.90%)		1007

In age group of the 21 to 30 years, there was a greater rate of unfavourable pregnancy outcomes (52 percent), with 498 patients aborting out of 527 who had vaginal haemorrhage in the first trimester. 53 percent of the patients in the Amirkhani et al. research was between the ages of 25 and 34.

Table 2: Parity parameters

Obstetric history/Parity	continued pregnancy patients	Aborted patients	Percentage	Total
Multigravida	94	270	36.1	364
Primigravida	69	574	63.9	643

In the current study, 64% of patients who had bleeding during the first trimester were primigravids, while 36% were multigravidas. According to study, 43.3 percent of primigravids and 56.7% of multigravidas' patients presenting with first trimester bleeding were primigravids.

Table 3: Gestational age.

Gestational age	continued pregnancy patients	Aborted patients	Percentage	Total
greater than 10 weeks	37	34	7	71
Greater than 6 weeks	8	766	76.9	774
7-10 weeks	118	44	16.1	162

Abortion rates were much greater in patients with first trimester haemorrhage before 6 weeks of gestation (77 percent) than that after 10 weeks of the gestation (significantly lower rates) (7 percent).

Table 4: Type of bleeding.

Tye of bleeding	Continued pregnancy patients	Aborted patients	Percentage	Total
Heavy	6	163	16.8	169
Spotting	157	681	83.2	838

Table 5: Ultrasound

U.S.G	continued pregnancy patients	Aborted patients	Percentage	Total
Subchorionic hematoma	9	65	7.3	74
Incomplete abortion	0	238	23.6	238
Normal outcomes	154	0	15.3	154
Missed abortion	0	411	40.8	411
Complete abortion	0	99	9.9	99
IUFD	0	31	3.1	31

Eighty-three percent of the 1007 females who experienced vaginal bleeding during the first trimester had spotting, which had an abortion rate of eighty-one percent, while sixteen percent had severe bleeding, which had a 96.4 percent abortion rate. 96.6 percent of the patients in the study. Experienced the moderate to severe bleeding, while 3.30 % of the patients experienced the spotting. 4

Patients who had uterine curettage were found to have missed 40% of their pregnancies. In 74 individuals, USG discovered sub chorionic hematoma, and 65 of those women ultimately miscarried after receiving conservative treatment. In 23 percent of cases, the abortion was not complete, necessitating an emergency curettage. 15.3 percent of patients delivered properly after reaching term.

Table 6: Management.

Management	Number
Conservative treatment	163
Tocolytics	75
Uterine curettage	745
Cervical cerclage	2
Transfusion	24

Urinary curettage was necessary for 745 patients. 24 individuals with significant bleeding required blood transfusions. For 75 individuals, tocolytics were initiated, and 2 patients underwent cerclage.

Table 7: Pregnancy outcomes.

Pregnancy outcome	percentage	Number
preterm labor	15.3	25
PIH	5.5	9
FTVD/LSCS	68.7	87+25
2nd trimester abortion	1.8	3
PROM	6.75	11
APH	1.8	3

There were 163 patients who carried their pregnancies past the first trimester, 25 of whom gave birth prematurely. 112 patients delivered either vaginally or with LSCS after carrying to term. Six individuals experienced bleeding in the second and third trimesters; of these, three experienced second-trimester abortions and three were identified as having ante-partum haemorrhage. According to study, 38 percent of patients had a normal vaginal delivery while 41 percent required an LSCS.[12] Preterm labour affected 15% of patients, PROM affected 8.3% and placental abruption affected 13.3%.

Table 8: Neonatal outcome.

Neonatal outcome	Number
2-2.5 kg	12
APGAR (5) less than 7	9
less than 2 kg	7
greater than 3 kg	141
Mortality	NIL
APGAR (5) greater than 7	151

160 of the females who experienced first trimester bleeding gave birth to live children. Out of these, 88.12% of the infants were born weighing more than 3 kg. 5.6% of newborns needed NICU treatment.

DISCUSSION

The bleeding of first-trimester is linked not just to a higher likelihood of pregnancy problems but also to miscarriage. First trimester bleeding frequently indicates a threatening abortion, which is concerning for both the patient and the clinician.[13] The patient should be advised to stay in bed if a healthy foetus is shown on ultrasound, but there is no proof that any conservative or medical therapy is helpful if there is a blood clot or accumulation around the foetus' sac. Injections of either progesterone or βHCG have not been shown to be helpful in enhancing pregnancy outcomes. First trimester bleeding was linked to a higher chance of premature delivery.[5,10] Early in pregnancy, spontaneous abortion may arise due to poor implantation and invasive trophoblasts, however later on in pregnancy, preterm birth, PPROM, placental ablation, and preeclampsia may occur.[14] For the purpose of determining the source of bleeding, an ultrasound examination was

thought to be a crucial inquiry. According to research studies transvaginal ultrasound and monitoring the rise in blood levels of βHCG were the most crucial diagnostic procedures in the pregnancies having the 1st trimester of vaginal bleeding.[15,16]

It was shown in earlier research that length of the pregnancy in these women is the shorter and likelihood of the pre-mature delivery is the higher, and as a result, such of the pregnancies had development failure and also the newborn having the low birth weight as a result of the pre-term delivery.[17,18] Numerous research studies supported the low birth weight and Apgar scores of the 5 or below in pregnancies with the 1st trimester bleeding.[19]

First-trimester bleeding has no bearing on the course of birth, according to a systematic review research.[20] The likelihood of a caesarean section, however, is higher in women who are bleeding than in others, according to certain another research.

CONCLUSIONS

First trimester vaginal bleeding foretells ancillary maternal and foetal difficulties, according to the findings of the current study. Additionally, as clinical intervention plays a crucial part in preserving pregnancy and lowering foetal problems, careful supervision and planning by the doctor are crucial.

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