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Original Research Article

Evaluation of cases with first trimester bleeding and its outcome

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Abstract

Objective: To study the cases with first trimester bleeding and its outcome.

Materials and methods: This prospective study was done on 60 pregnant women with first trimester vaginal bleeding visiting Kamla Nehru State Hospital for Mother and Child, IGMC Shimla, Himachal Pradesh, India during the period of one year. All women were evaluated for the outcomes including abortion, preterm rupture of membranes, preterm labor, low birth weight and intra uterine growth retardation and the mode of delivery. Data were analyzed using SPSS- 11.

Results: Out of total 60 patients 14 aborted in first trimester. 61% of cases were of 25-30 age group. 43% cases had preterm deliveries. Patients undergoing LSCS were 56%. Patients with history of abortion and previous LSCS were 10 and 9 respectively. Patients with placental complications were 40%. Neonates with low birth weight were 45% and those admitting to NICU was 35%. IUGR was seen in 16.6%. Three neonates had perinatal mortality.

Placental complications like placenta previa and abruptio was strongly associated with first trimester bleeding.

Conclusion: According to results of present study vaginal bleeding in first trimester of pregnancy may predict further maternal and fetal complications. We recommend training pregnant women regarding those complications and their prevention.

Keywords: Vaginal bleeding, pregnancy outcomes, first trimester

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 and cervical pathology [1].

Other complications are hydatidiform mole, preterm delivery, and low birth weight. It has been reported that 50% of women presenting to an emergency room with vaginal bleeding will go on to have a normal pregnancy [2].

Meta-analyses indicate that vaginal bleeding is associated with a twofold increased risk of other complications during that pregnancy [3].

Vaginal bleeding can be a normal sign of implantation of the pregnancy, may herald the initiation of spontaneous abortion, or may be the sign of a pathologic condition such as ectopic pregnancy or gestational trophoblastic disease.

Vaginal bleeding after confirmation with a positive pregnancy test requires further assessment in order to identify normal or abnormal development of the pregnancy or a pathologic condition that requires intervention [4, 5].

After taking a detailed history, physical and pelvic examination should be done and further, with the help of imaging techniques, diagnosis and plan of management is decided [1].

This study aimed to evaluate the perinatal outcomes in patients with the complains of vaginal bleeding in the first trimester.

Emerging evidence suggests that it may be associated with poor fetal and 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), and IUGR [6].

Material and Methods

The present study is a one year prospective study conducted in the department of Obstetrics and Gynaecology, Kamla Nehru State Hospital for Mother and Child, Indira Gandhi Medical College, Shimla, Himachal Pradesh. from July 1, 2016 to June 30, 2017. Study included 60 patients with first trimester bleeding without any associated risk factors. The aim of this study was to evaluate the cases with first trimester bleeding and its outcome. All women with vaginal bleeding in first trimester of pregnancy whose pregnancy was confirmed chemically were studied. Women with chronic medical complications including diabetes

and hypertension and any blood disorder were excluded. Sonography was performed for all women in the 6-8 weeks intervals. The women visited every four weeks in the first 6 months of pregnancy, weekly in the 7th and 8th months as weekly and once a week in the last two 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 of placenta, the length and duration of pregnancy and the birth weight were recorded. Data were analyzed using SPSS-11 software.

Table 1: Obstetrical characteristics of studied women (n= 60)

Age (Year)	17-24	20(33%)
	25-34	37(61%)
	>35	3(5%)
Bleeding volume in current pregnancy	Spotting	2(3.3%)
	Moderate	44(73.3%)
	High	14(23.3%)
Parity	0	18(30%)
	1	32(53%)
	2	5(8.3%)
	=>3	5(8.3%)
History of bleeding in previous pregnancies	Yes	20(33.3%)
History of abortion in previous pregnancies	Yes	10(16%)

In this study the women whose pregnancies were terminated due to the diagnosis of ectopic pregnancy (EP) and incomplete, complete abortions were 5%. 33% of patients were in age group of 17-24 years and 61% in 25-34 years of age. Most of the women were multigravida ie 73%. There were 33% women with history of bleeding in previous pregnancy. And 16% had history of abortion.

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

	N (%)
Premature labor	21 (35%)
Premature rupture of membrane	5 (8%)
Placental abruption	9 (15%)
Placenta Previa	16(26.6%)
Intra uterine death	1 (1.6%)
Still births	2 (3.3)
Intra uterine growth retardation	10 (16.6%)
No Complication	8 (13.3%)

This table depicts that 35% of patients with history of first trimester bleeding had premature labour and 8% had premature rupture of membrane. 40% of patients had placenta previa and abruption. While three neonates had perinatal mortality.

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

	N (%)
Abortion	14 (20.5%)
Termination of pregnancy	10 (16.6%)
Normal vaginal delivery	14 (23.3%)
Cesarean section	34 (56%)
Minute 5 APGAR score < 7	19 (28%)
Admission in NICU	21 (35%)
Birth weight <2.5Kg	27(45%)

This table that most number of patients underwent LSCS at term and preterm. Excluding abortions the total neonates born to 46

women were 47 neonates (one twin). Normal vaginal deliveries were 14.28% and Neonates with APGAR less than 7 were 19. 21 Neonates were admitted in NICU and 45% neonates weighed less than 2.5Kgs.

Discussion

In this study 77% of pregnant women with first trimester vaginal bleeding continued their pregnancy that shows more than half of these women terminated their pregnancy successfully. As quoted by Snell BJ *et al.* and Amirkhani Zh *et al.* vaginal bleeding occurs among 15-25% of pregnancies and half of them continue their pregnancy^[10, 11].

First-trimester bleeding is not only associated with miscarriage but also with a higher rate of pregnancy complications.

Three major reasons for first trimester bleeding are spontaneous abortion, EP and trophoblastic diseases in the pregnancy. In the study of Dogra *et al.* it is reported that the most common causes for first semester bleeding are abortion and EP which is consistent with our study showing complete and incomplete abortions the most common cause in first trimester bleeding^[12].

In our 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.* and Thorstensen *et al.* reported that in pregnancies with first trimester bleeding the most important diagnostic actions include transvaginal ultrasound and evaluating the rising of serum level of β HCG^[13, 14].

In different studies such as Saraswat *et al.* and Siddiqui *et al.* 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 previa, placenta disruption and bleeding with unknown place^[16, 17].

Bleeding during first trimester was associated with increased risk of preterm delivery our study which shows preterm deliveries to be 43% is consistent with study conducted by De Sutter P *et al.*^[18].

In our study the placental complications were seen in 60% cases.

Surgical intervention was seen in 56% cases premature deliveries were seen in 43% neonates and 45% of the neonates were low birth weight. It was also seen in various studies like Harlev A *et al.* and Riahinejad S *et al.* [19, 20]. These studies shows the length of pregnancies in these women is less and the possibility of premature delivery is more and as a result such pregnancies developed growth failure and newborn had low birth weight due to premature delivery.

The limitation of this study is the determination of the intensity, amount and frequency of bleeding that appear to be effective factor in the end of pregnancy.

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