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## Pregnancy outcome in women with first-trimester bleeding per vaginum

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### Abstract

**Background:** Bleeding per vaginum during early pregnancy is a common obstetric problem. It develops a source of anxiety for the family, mother as well as clinicians. Vaginal bleeding always associated with preterm delivery, intrauterine death (IUD), neonatal mortality and low birth weight. This study was designed to evaluate the pregnancy outcome in women with first trimester bleeding per vaginum.

**Materials and methods:** A total of 200 pregnant women with first trimester bleeding per vaginum. All the cases were evaluated for the mode of delivery, weight of the newborn, pregnancy outcome, details of miscarriage and APGAR scores were noted.

**Results:** Majority cases belonged to third decade of age (84.5%). Among the cases, 71% of cases were Primigravida and 29% cases were multigravida. At the time of bleeding, majority cases (60.5%) had more than 8 weeks of gestation and 39.5% had bleeding at less than 8 weeks of gestation. In this study, 9% cases have subchorionic haemorrhage evidenced by USG. 8.50% cases had first trimester miscarriage, 4.50% cases had second trimester miscarriage, 11.50% preterm delivery and 75.50% fullterm delivery. 56.89% cases had child with birth weight between 2.6-3 kg.

**Conclusion:** Pregnant women with severe bleeding are more likely to abort than women with minimal bleeding. It is necessary to provide proper counseling regarding the possible outcome of pregnancy.

**Keywords:** First trimester, bleeding per vaginum, pregnancy outcome

### Introduction

Bleeding per vaginum is commonly seen early pregnancies and is associated with fetal and maternal morbidity. It develops a source of anxiety for the family, mother as well as clinicians. About 25% of pregnant women complain of bleeding during first trimester<sup>[1]</sup>. Around 50% of first trimester bleeding will lead to miscarriage<sup>[2]</sup>. Vaginal bleeding is associated with increased risk of suboptimal pregnancy outcome like preterm delivery, intrauterine death (IUD), neonatal mortality and low birth weight<sup>[3-5]</sup>. This study was designed to evaluate the pregnancy outcome in women with first trimester bleeding per vaginum.

### Materials and methods

The present prospective study was carried out in the department of Obstetrics and Gynaecology at MNR Medical College and Hospital, Sangareddy from April 2018 to December 2020. A total of 200 pregnant women with first trimester bleeding per vaginum admitted in labour ward were recruited. Cases with singleton pregnancy up to thirteen weeks with positive fetal heart motion, positive pregnancy test and bleeding per vaginum were included. Cases with molar pregnancy, bleeding at the time of loss and ectopic pregnancy were excluded. Informed consent was obtained from all the cases and study protocol was approved by the institutional ethics committee.

History of vaginal bleeding included of severity and duration of bleeding was collected. Ultrasound examination was performed for gestational age and fetal viability. Demographic data, clinical and obstetric history was collected. Collected data were analyzed with SPSS statistical software (Version 16).

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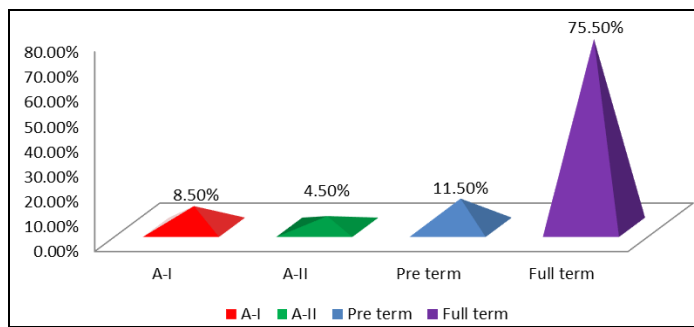
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**Results**

**Table 1:** Demographic and obstetric data of study participants.

Parameters	Total cases (n=200)	
	Number	Percentage (%)
<b>Age (In years)</b>		
18-20	18	9%
21-25	65	32.5%
26-30	104	52%
Above 30 years	13	6.5%
<b>Gravidity</b>		
Primigravida	142	71%
Multigravida	58	29%
<b>Gestational age at the time of bleeding (In weeks)</b>		
Below 8	79	39.5%
Above 8	121	60.5%
<b>Details of sub chorionic hemorrhage</b>		
Present	18	9%
Absent	182	91%



**Fig 1:** Details of pregnancy outcome

**Table 2:** Details of mode of delivery and birth weight. (n=174).

Parameter	Total cases (n=174)	
	Number	Percentage (%)
<b>Mode of delivery</b>		
Full term (n=135)		
Vaginal	51	37.77%
LSCS	84	62.22%
Pre term delivery (n=39)		
Vaginal	32	82.05%
LSCS	07	17.94%
<b>Birth weight (In Kg)</b>		
<2 Kg	15	8.62%
2.1-2.5 Kg	32	18.39%
2.6-3 Kg	99	56.89%
More than 3 Kg	28	16.09%

**Table 3:** Details of APGAR score.

APGAR score	Total cases (n=174)	
	Number	Percentage (%)
<b>At 1 minute</b>		
<5	14	8.04%
5-8	127	72.98%
>8	33	18.96%
<b>At 5 minutes</b>		
<7	29	17.4%
7-9	115	66.09%
>9	30	17.24%

**Discussion**

First trimester bleeding is a threatening sign of abortion and is always associated with miscarriage and pregnancy complications [6]. Around 25% of pregnant women complain of

bleeding during the first trimester [7]. The present study was designed to evaluate the pregnancy outcome in women with first trimester vaginal bleeding. In the present study, majority cases belonged to the 3<sup>rd</sup> decade of age (84.5%). A study by Manonmani and Nandini on 150 pregnant women with found that the majority cases with first trimester vaginal bleeding were in between 26-30 years (42%) [8]. A study by Kamble PD *et al.*, found that the majority cases with first trimester vaginal bleeding were in between 21-30 years [6]. While Amirkhani *et al.*, found 53% of cases in the age group between 25-34 years [9]. A study by Kalyani Singh stated that first trimester vaginal bleeding is the common problem in 20-30 years age [10]. A study by Shivanagappa M *et al.*, noticed that first trimester vaginal bleeding is common in 21-30 years (69%) [11]. Study by Aronu ME, *et al.*, found that the mean age of the cases was 30.18±5.38 with median age 30 years [19].

Among the cases, 71% of cases were Primigravida and 29% of cases were multigravida. Manonmani and Nandini in their study on 150 pregnant women found that 58% of cases were primi and 42% of cases were multigravida [8]. Kamble PD *et al.*, found that 64% cases were primi and 36% were multigravida [6]. While in a study by Amirkhani *et al.*, found that 56.7% cases were primi and 43.3% cases were multigravida [9]. 53% of cases were primi and 47% cases were multigravida. The difference was statistically not significant [11]. In a study by Patel NG *et al.*, on 100 cases first trimester bleeding found 66% multigravida cases [12]. Preeti Lewis *et al.*, in their study noticed that the common age group for first trimester vaginal bleeding was 21-30 years, which is correlated with this study [13].

At the time of bleeding, majority cases (60.5%) had more than 8 weeks of gestation and 39.5% had bleeding at less than 8 weeks of gestation. In this study, 9% of cases have subchorionic hemorrhage evidenced by USG. A study by Shivanagappa M *et al.* noticed that majority cases had vaginal bleeding between 6-8 weeks (35%), followed by, 10-12 (33%) weeks and 8-10 weeks of gestation (32%). Subchorionic bleeding was seen in 71% cases [11]. Study by Steven *et al.*, and Pederson *et al.*, was seen subchorionic bleeding in 20% and 18% cases respectively [14, 15]. In the present study, 8.50% of cases had 1<sup>st</sup> trimester miscarriage, 4.50% cases had second trimester miscarriage, 11.50% pre term delivery and 75.50% full term delivery. Study by Manonmani and Nandini noticed that 68% full term deliveries, 14% pre term delivery, 4% 2<sup>nd</sup> trimester abortion and 14% first trimester abortion [8]. Kamble PD *et al.*, noticed that among the continued pregnancy cases beyond first trimester 15.3% had preterm labour and 68.7% had full term delivery [6]. Patel NG *et al.*, in their study on 100 cases noticed that 64 pregnancies continued beyond 20 weeks of gestation. Among those 78.1% patients delivered full term, 21.9% delivered preterm, 14.1% had foetal growth restriction, 30.3% had NICU admission, 9.4% perinatal death and 35.9% were low birth weight [12]. Preeti Lewis *et al.*, in their study noticed that first trimester vaginal bleeding was more in multigravida [13]. In this study, 56.89% cases had child with birth weight between 2.6-3 kg. Study by Manonmani and Nandini noticed that 44% newborn babies weighing 2.6-3 kg [12]. 88.12% babies had birth weight more than 3 kg [6]. In this study, mortality rate was 3.44%, whereas in a study by Preeti Lewis *et al.*, seen mortality rate 2.06%, Sipila P (1.11%) *et al.*, Wijesiriwardana A *et al.*, (1.5%) and Mulik V *et al.*, (2.11%) [13, 16-18].

**Conclusion**

Per vaginal bleeding during the first trimester of pregnancy is associated with fetal and maternal morbidity. The bleeding per

vaginum during the first trimester of pregnancy was more common in age group 21-30 years (84.5%) and in primigravida (71%). Vaginal bleeding was common in 8-12 weeks of gestation. It is necessary to provide proper counselling regarding the possible outcome of pregnancy.

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