

## **Outcome of Pregnancies Complicated by Early Vaginal Bleeding**

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**Objective:** To evaluate the effect of early vaginal bleeding before 22 weeks of gestation on the pregnancy outcome.

**Design:** A Retrospective Study.

**Setting:** Bahrain Defense Force Hospital.

**Method:** One hundred ten women who met the criteria were included in the study from January 2005 to January 2006. The age, timing, severity of bleeding and pregnancy outcome were documented from the previous obstetric history. The data was described in details and statistical analysis was done.

**Result:** The average age was 26 years. Sixty-five (59.1%) had bleeding during the first trimester, 41 (37.3%) of them during 9-12 weeks. Fifty-four (49%) women were classified as heavy bleeders and 56 (50.9%) were light bleeders. Eighty-two (74.5%) women had suboptimal pregnancy outcomes and 70 (63.6%) had abortion. There was no statistical significance between the age and the outcome nor between the gestational age and the outcome; however, there was highly significant association between heavy bleeding and adverse pregnancy outcome.

**Conclusion:** Gestational bleeding in early pregnancy is associated with adverse pregnancy outcome. The majority of the cases had suboptimal outcome, more than half of them ended with abortion.

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Pregnancy is harmonious feeling between mother and fetus, but it could also be a time of worry and concern for many women. Bleeding is a common complication of pregnancy; 20%-30% of women report some bleeding during the first 22 weeks of pregnancy<sup>1</sup>. Bleeding could be due to implantation, infection, cervical irritation, ectopic pregnancy or threatened abortion. Many women who have light bleeding would be able to have normal pregnancies and healthy babies<sup>2</sup>.

There is an increasing evidence from retrospective and prospective studies that early gestational bleeding is associated with adverse pregnancy outcome<sup>3</sup>. This suboptimal pregnancy outcome

includes abortion, preterm delivery, parental death, low birthweight and congenital anomalies<sup>4,5</sup>. In addition, it has been estimated that nearly 50% of pregnancies complicated by heavy bleeding terminate in spontaneous abortion and the pregnancy that continue, despite bleeding, varies from 1%-20%<sup>6</sup>. Bleeding frequently increases with advanced age ( $\geq 35$  years), previous miscarriages, infertility problems and using an IUCD prior to the pregnancy<sup>7</sup>. Women who had vaginal bleeding in the first trimester had double the risk of delivering a preterm infant compared with those who had no bleeding<sup>8</sup>.

First-trimester vaginal bleeding is an independent risk factor affecting obstetric outcome adversely, which is directly proportional to the amount of bleeding<sup>9,10</sup>. Unfortunately, studies on the relation between gestational bleeding and pregnancy outcome in developing countries are few.

The aim of this study is to evaluate the effect of early vaginal bleeding before 22 weeks of gestation on the pregnancy outcome and complications.

## METHOD

One hundred ten women who met the criteria were included in the study from January 2005 to January 2006. Age group from 19-35 years and pregnant women who had bleeding before the 22 weeks gestation were included. Those who had major medical or obstetrical illness, multiple pregnancies, patients with history of recurrent abortions (three or more consecutive spontaneous abortions) and grandmultiparas (mothers who have given birth five times or more before) were excluded.

Bleeding was classified as “light” if described by the patient as spotting lasting not more than one week; “heavy” if described as hemorrhage lasting more than one week with or without clots. Statistical analysis was done using SPSS version 10. P value less than 0.05 was considered significant.

## RESULT

One hundred ten women were included in the study. Ninety-three (84.5%) patients were 19 to 30 years old. The average age was 26 years, see table 1. The timing of bleeding was classified into: no women had bleeding before 4 weeks of gestation, 41 (37.3%) had bleeding between 9 to 12 weeks, 34 (30.9%) had bleeding between 13-16 weeks, 11 (10%) had bleeding between 17 to 22 weeks, see table 2. Generally, 65 (59.1%) bled during the first trimester while 45 (40.9%) bled during the second trimester. Fifty-six (50.9%) were classified as light bleeders and 54 (49%) were heavy bleeders.

**Table 1: Patients' Age**

	Age	Number and percentage
Years	19-25	48 (43.6%)
	26-30	45 (40.9%)
	31-35	17 (15.5%)
	<b>Total</b>	<b>110 (100.0%)</b>

**Table 2: Timing of Vaginal Bleeding**

<b>Bleeding time</b>	<b>Frequency</b>
4-8	24 (21.8%)
>8-12	41 (37.3%)
<b>Weeks</b> >12-16	34 (30.9%)
>16-22	11 (10.0%)
<b>Total</b>	110 (100.0%)

Seventy (63.6%) pregnancies ended in abortion, 8 (7.3%) had cesarean section, in 2 (1.8%), the bleeding was associated with ectopic pregnancy at 8 and 11 weeks of gestation, one (0.9%) had intrauterine death at 32 weeks, and one (0.9%) had premature vaginal delivery at 32 weeks who had normal but low weight infant (2.15kg), see tables 3, 4. Twenty-eight (25.5%) abortion cases had bleeding between 8-12 weeks and 20 (18.2%) the bleeding was between 13-16 weeks. Overall abortion was associated with first trimester bleeding (41%). The pregnancies which ended in cesarean section, all had normal babies except two cases who had low birth weight; the cause was intrauterine growth retardation (925g–2000g).

**Table 3: Pregnancy Outcome**

<b>Outcome</b>	<b>Frequency</b>
<b>Normal</b>	28 (25.5%)
<b>Suboptimal</b>	82 (74.5%)
<b>Total</b>	110 (100%)

**Table 4: Type of Pregnancy Outcome**

<b>Outcome</b>	<b>Frequency</b>
<b>Normal</b>	28 (25.5%)
<b>Abortion</b>	70 (63.6%)
<b>Ectopic pregnancy</b>	2 (1.8%)
<b>Cesarean section</b>	8 (7.3%)
<b>Intrauterine death</b>	1 (0.9%)
<b>Premature delivery</b>	1 (0.9%)
<b>Total</b>	110 (100.0%)

## **DISCUSSION**

Most patients were 19-30 years old. The mean age was 26 years old, corresponding to the mean reproductive age in our culture. The results of our study revealed that suboptimal outcomes were seen in 74.5% of the women who suffered from early vaginal bleeding. Abortion was the most common, (63.6%). Most of the bleeding (59.5%) occurred in the first trimester, which was associated with adverse pregnancy outcomes; it is similar to a study by Arafa et al about “outcomes of pregnancies complicated by early vaginal bleeding”<sup>11</sup>.

In addition, the results of the present study suggest that there is a highly significant association between heavy bleeding and adverse pregnancy outcome (p=0.00) compared to a study done by Berkowitz who found that adverse outcomes occurred in 19% of pregnancies complicated by light

bleeding and 23% of those associated with heavy bleeding<sup>1</sup>. In our study, eight pregnancies ended with cesarean section because of placenta previa, intrauterine growth retardation, fetal distress, cephalopelvic disproportion and breech presentation, this is similar to a study by Funderburk et al<sup>5</sup>. Therefore, early bleeding is considered one indicator of high risk pregnancy outcome which necessitates early referral to obstetrics and gynecology specialist.

In addition, it was noticed that large number of patients had missing information about their obstetric history. It should be emphasized that comprehensive obstetric history is mandatory for diagnostic, research, ethical and legal purposes.

## CONCLUSION

**Gestational bleeding in early pregnancy is associated with adverse pregnancy outcome. The majority of cases had suboptimal outcome, more than half of them ended with abortion.**

**Finally, the question of the magnitude of association between bleeding and high adverse reproductive outcomes could be resolved by further studies with clear definitions of timing and severity of bleeding. There is no doubt that recognition of these associations may be useful for future detection of high risk pregnancies.**

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