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Bleeding in Early Pregnancy Various Ways of Presentation and Outcomes

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ABSTRACT

Background: Early pregnancy bleeding is a frequent yet upsetting clinical presentation that can be a sign of a number of problems, from benign causes to potentially fatal consequences. If not assessed and treated very away, it can have a serious negative impact on the health of the mother and the fetus. **Objective:** Assessing the various clinical signs, underlying causes, and maternal-fetal outcomes of early pregnancy bleeding in women who present to a tertiary care hospital was the aim of this study. **Methodology:** This qualitative study was carried out at a Quetta tertiary care hospital's obstetrics and gynecology department from Jan 2025 to May 2025. Random sampling was used to choose 170 pregnant women who had vaginal bleeding and were up to 20 weeks along in their pregnancy. Semi-structured interviews were used to gather data, which were then thematically examined to find important clinical trends and results. **Results:** Incomplete miscarriage (17.6%) missed abortion (11.8%), ectopic pregnancy (14.7%), molar pregnancy (11.8%), and threatening miscarriage (44.1%) were the most frequent diagnoses. Clinical manifestations varied from minor bleeding and spotting to bleeding accompanied by tissue passing and abdominal pain. Preterm delivery (17.6%), intrauterine growth restriction (8.8%), stillbirth (2.9%), and miscarriage (29.4%) were among the unfavorable results, even though 41.2% of pregnancies ended without any problems. **Conclusion:** Unfavorable outcomes for both the mother and the fetus are significantly predicted by early pregnancy hemorrhage. The prognosis can be improved by prompt diagnosis by clinical evaluation, ultrasonography, and β-hCG monitoring, as well as prompt treatments. In order to reduce anxiety and guarantee the best possible care, the study highlights the significance of early evaluation and patient counseling.

INTRODUCTION

Loss of more pregnancies occur during the early weeks of pregnancy. The leading causes of bleeding during the early stage of pregnancy are molar pregnancy, induced abortion, ectopic pregnancy, spontaneous miscarriage, and local reasons. Before 24 weeks of gestation, spontaneous expulsion of the products of conception, in the absence of signs of life is referred to as a spontaneous miscarriage. In 1997 the W.H.O. stated miscarriage as the extraction of a fetus or embryo weighing no more than 500 grams out of its mother. It is a widely held belief that 15 percent of the pregnancies incur spontaneous miscarriage.

Miscarriages which occurred within the first five weeks of pregnancy are classified as pre-clinical or senses. An embryonic miscarriage takes place at 9 gestation weeks or a length of 75mm without any heartbeat motions. The fetal miscarriage occurs when the CRL exceeds 30 mm without a heart activity or at 10-20 weeks of pregnancy. Elise de La Rochebrochard and Patrick Thommeau.in their study, found out that women above 35 were more likely to give birth to a miscarriage, but that this possibility was even greater in couples that consisted of women over 35 and men over 40. [1]

Some of the possible causes of spontaneous miscarriages are abnormal conceptions, immunological, abnormalities of the uterus, endocrine variables, maternal diseases, infections which can kill both mother and the unborn, twins and trauma among the many causes.

According to Azim M. and colleagues.2, 5.3 percent of individuals in the population were found to have a spouse affected by a chromosomal abnormality which might be in the form of a sex chromosomal abnormality, translocation, inversion or deletion. Several types of miscarriages include threatened, unavoidable, complete, incomplete, septic and induced abortions.

These are high risk pregnancies because the pregnancies increase chances of occurrence of numerous challenges during the later stages of pregnancy. Bhattacharya S. et al. have determined that the miscarriage group was a high risk of preeclampsia, miscarriage threat, induced labor,

instrumental delivery, preterm delivery, low birth weight, postpartum hemorrhage and preterm bleeding (3). Cosfe J and colleagues in their study about the epidemiology of ectopic pregnancy in France [4] found out that ectopic pregnancy incidence constituted 1.6 percent in all pregnancies reported and 2 per cent of live births. The main risk factors were found to be cigarette smoking, prior surgery of the pelvis and P.I.D.

There can be both an acute and subacute form of ectopic pregnancy. Acute presentation is correlated with ectopic pregnancy rupture that is associated with severe intraperitoneal bleeding. The sub-acute type presents the symptoms of vaginal bleeding and stomach pains.

Blood may either be changed or fresh. Another problem delays in the menstruation. Molar pregnancy occurs when there is vaginal bleeding accompanied by molar tissue when hydatidiform mole occurs. It could be a fluid that has a consistency of prune juice. Invasive mole or chorio cancer can be indicated by abdominal pain, amenorrhea, vaginal bleeding and those of uterine perforation.

The gestational age of a complete hydatidiform mole at diagnosis indicated the downward trend and these impressions were also reflected by reduced incidences of pre-eclampsia, hyperemesis and vaginal bleeding.5 Pregnancy and consequent maternal cardiovascular morbidities are also associated with the first trimester bleeding that did not result in miscarriage.

After controlling for other unfavorable pregnancy outcomes, women with pre-pregnancy cardiovascular disease had a 2.2-fold higher risk of first-trimester bleeding without miscarriage, and this condition was linked to a 1.6-fold (1.4-1.8) increased risk of subsequent maternal ischemic heart disease. [6].

Maturity age, pregnancy loss history and alcohol and tobacco consumption, the use of illicit drugs (e.g., cocaine), non-steroidal anti-inflammatory drugs and caffeine (demonstrating high consumption of caffeine) are predisposing factors of miscarriages.

In another analysis [7], Garcia CR coworkers found out that although many risk factors were associated with miscarriage in their initial analysis, only age extremities (less than 25 and more than 35) and complaints of bleeding were finally associated with miscarriage. There was an unfavorable relationship between miscarriage and complaints of pain, a level of human chorionic gonadotropin exorbitant 500 (HCG < or = 500 1.4/ml in contrast with hcg. 501-2000), and presence of cervical infection at the same time.

The cases of bleeding in the early weeks of pregnancy are not straightforward and occur frequently. [8,9] Various authors of other institutions have reported various incidences of bleeding in early pregnancy accompanied by the dangers it poses. The recorded cases were usually between 12 and 40 percent. [10] Such studies indicated that there were high incidences of low birth weight, pre-mature baby, death during birth and abortions or miscarriages. [11] Most of these studies involved the use of retrospective studies or studies which only involved interviews. Additionally, no study of such sort has been carried out in this environment. Similar studies carried out on individuals who reaped benefits of assisted reproductive technology to conceive found that singleton pregnancy hemorrhage that occurs at an earlier age increases risk of bad pregnancy outcome. [12]

Bleeding during pregnancy may be of concern to mothers because it is associated with doubt to the well-being of the baby in the womb besides the mother herself.

Recent statistics indicate that it is possible that there can exist a connection between these cases of bleeding and poor outcomes both to the mother and the fetus [13-15]. Some of the factors that will influence the outcome of pregnancy related bleeding include the intensity of the bleeding and the underlying cause of the bleeding, the gestational age of the occurrence of the bleeding [16]. After comprehensive history, physical examination, and pelvis examination, further diagnostic testing with the help of imaging leads to diagnosis and the development of an adequate treatment plan. Statistics show that the likelihood of losing pregnancy in more than 50 percent of the pregnancies which happen with first-trimester hemorrhage.

Even those pregnancies which do not terminate can result in poor maternal and fetal outcome including preterm delivery, preterm premature rupture of membranes (PPROM), placental abruption, preeclampsia, and intrauterine growth restriction (IUGR).

Quite a series of maternal factors affect pregnancy loss, among them being maternal age, thrombophilia, an unsuccessful therapeutic of infertility, maternal systemic diseases such as diabetes mellitus and hypothyroidism, weight, and anatomic malformation of the uterus or the anatomical malformation of the uterus. Moreover, recent evidence indicates that there is a relationship between adverse fetal and maternal outcomes and hemorrhage during the first trimester. Bleeding during the first trimester of pregnancy can be a sign of underlying lactational failure and later cause complications in the second half of pregnancy, such as IUGR; preterm birth, premature rupture of the membranes (PROM), and the improved risk of pre-eclamptic toxemias [17].

This research will be conducted to determine the various clinical manifestations of bleeding during early pregnancy and their causation. It further tries to assess the maternal and fetal consequences brought about by such presentations. The results would aid in a better diagnosis, risk evaluation and treatment measures.

LITERATURE REVIEW

Gestational bleeding is one of the main clinical challenges because it often leads to patients developing severe anxiety and clinicians feeling at loss when it comes to formulating their diagnosis. The first trimester is the most important period of embryonic development as it entails the first 12weeks of pregnancy. Any fainting or loss of blood in such a period should be well observed. It is believed that such vaginal hemorrhage occurs due to early pregnancy in 20-30 percent of known pregnancies, and the results of the process depend on the cause, period, and other clinical features [18].

The possible differential diagnosis of bleeding during the first trimester includes a viable intrauterine pregnancy with subchorionic hemorrhage, threatening abortion, unavoidable or incomplete miscarriage, vanished abortion, a molar pregnancy, and an ectopic pregnancy

[19]. Subchorionic hemorrhage is one of the more common sonographic indicators associated with early bleeding. It has been shown that subchorionic hematomas can be observed during early pregnancy in up to 18 percent of cases and they may be prone to the development of miscarriage, especially when the blood clot is large, or when there are uterine contractions [20].

The near-deadly condition called the ectopic pregnancy, where there is the implantation not in the cavity of uterus (typically the fallopian tube), appears at an early stage of pregnancy by causing bleeding and abdominal pain. Major cause of maternal morality during the first trimester is ectopic pregnancies and comprise 1.3 to 2 per cent of total pregnancies according to a large population study [21]. Improved imaging techniques and enhanced suspicion in clinicians have been attributed to the rise of ectopic pregnancy diagnosis.

Another important cause is the miscarriage, which may be considered as a threat, inevitable, incomplete, complete, or missed abortion. The main signs of threatened abortion can be vaginal hemorrhage and a closed cervical os and positive viable intrauterine pregnancy. Normal birth happens in another half of the cases, and the rest of the cases can further progress to a complete miscarriage or hardships [22].

To a number of ways, the early pregnancy bleeding may be seen through little spotting of blood to intense bleeding with or without pains. Some of these women experience severe pain in the pelvis and hemodynamic instability e.g. in case of ectopic pregnancy or partial miscarriage, others go through painless bleeding e.g. due to subchorionic hemorrhage [23]. The time, quantity and quality of the bleeding together with parts of related symptoms such as dizziness, stomach pain, or the flow of products of the conception define clinical diagnosis.

The diagnosis process normally involves the use of a combination of history, physical examinations, transvaginal ultrasonography and quantitative levels of beta-human chorionic gonadotropin (2-hCG). The serial β-hCG values are of particular assistance in bifurcating ectopic pregnancy, failed pregnancy, and usual intrauterine gestation. Unnecessary rise in β-hCG (less than 66 % growth in 48 hours) [24] may be a sign of a nonviable pregnancy or ectopic gestation.

Multiple implications accompany the occurrence of bleeding in the first pregnancy trimester. It has been established in research that prenatal bleeding was significantly linked to deleterious consequences such as placental abruption, low birth weight as well as premature birth even where the pregnancy has been executed [25]. As Weiss et al. study noted, women with the first trimester bleeding have higher chances to face the consequences of premature birth (two times higher) and placental abruption (three times higher) [26]. Pregnancies with subchorionic hematoma normally end with miscarriage particularly in situations whereby the size of gestational sac is larger than twice the amount of the hematoma. Nevertheless, small hematoma after stable pregnancies usually has favorable prognosis [27]. Besides, the severity of fetal loss risk is the highest when bleeding co-occurs with other adverse characteristics like maternal age above 35, history of former miscarriages, and abnormal fetal heart movements during an ultrasound examination [28]. Early detection plays a very important role in case of ectopic pregnancy. An untimely diagnosis may cause a rupture of the tube and a large intra-abdominal hemorrhage, which is a serious threat to the life of the mother. Morbidity and mortality have decreased significantly because of the early diagnosis and treatment, whether by administration of methotrexate or operation such as a laparoscopic one [29].

Management depends on the nature of a diagnosis. Waiting care is suitable in the case of threatened miscarriages, medicinal or surgical interventions during incomplete or missed abortion. Newly established best practices on how to treat early pregnancy issues are established by the American College of Obstetricians and Gynecologists (ACOG) and the Royal College of Obstetricians and Gynecologists (RCOG) [30]. Treatment Ectopic pregnancies are either surgically or medically treated, which depends on the extent, 4-hCG levels, and clinical stability, where methotrexate is commonly used. Women receiving prenatal care must be closely monitored and subjected to frequent ultrasounds and repeated 3-hourly 3-h [31] in order to assure remission or progression.

Bleeding during early pregnancy is a multifactorial clinical problem whose symptoms and outcomes are various. Certain instances can go away, and the rest of them might reveal the presence of severe underlying illness that must be cured immediately. In order to improve maternal outcomes, it is necessary to understand causes, diagnostic approaches and care practices, effective and efficient. Improving the accuracy of diagnostics and supplying the affected women with psychological help should be the primary objectives of further researches.

Research Objective

The purpose of this research is to analyze the various clinical presentations, causalities, and outcomes of early pregnancy hemorrhage among the females attending a tertiary care hospital. It aims at establishing the amount of and type of bleeding episode, including molar pregnancy, ectopic pregnancy, subchorionic bleeding, and impending miscarriage. Further the maternal risk factors such as age, parity and history of miscarriage would be studied. It will also evaluate the value of serial beta hCG measurements and ultrasound when used as a diagnosis tool in assessing the cause and outcome of bleeding. The study also aims to determine the pregnancy outcomes like miscarriage, preterm birth, intrauterine growth restriction (IUGR) and maternal problems. It will also examine that relationship of severity of bleeding in time and its effects on the health of the mother and the fetus.

METHODOLOGY

This qualitative study was conducted within a period Jan 2025 to May 2025 in the Obstetrics and Gynecology Department of a hospital in Quetta that offers tertiary care. The aim of exploring the various clinical presentations, the pathogenesis and a prognosis of early-pregnancy bleeding was to be achieved through intensive patient experiences. A technique of random sample was applied by selecting 170 women who had reported a vaginal blood loss at an early period of pregnancy (up to 20 weeks gestation).

Participants were included in case they provided an assent to be interviewed and had the early pregnancy verified. Women were excluded in the study who were critically ill or unwilling to take part, had bleeding disorders, or those who were non-pregnant but bleed.

Semi-structured face-to-face interviews were conducted relying on an open-ended questionnaire aimed at exploring the symptoms, experiences, perceptions, and understanding related to their disease among patients. In order to ensure secrecy, all the interviews were conducted in a solitary setting that took between twenty and thirty minutes. Interviews allowed them to discuss the issues with permission and were audio taped with their verbatim transcription further analyzed. Thematic analysis was used to identify any common themes and revelations on the data. The manual classification of results was used, and themes were drawn to reflect the numerous phenomena of early pregnancy hemorrhage and the outcome that patients experienced that they believed it would cause. A valid ethical approval was obtained before the commencement of the study, and every participant signed an informed consent.

RESULTS

Table 1

Demographic and Clinical Profile of Participants (n = 170)

Variable	Category	Frequency (n)	Percentage (%)
Age Group (in years)	< 20	22	12.9
	20–30	80	47.1
	31–40	50	29.4
	> 40	18	10.6
Gestational Age at Presentation	≤8 weeks	62	36.5
	9–12 weeks	73	42.9
	13–20 weeks	35	20.6

Table 2

Clinical Presentation of Patients

Presentation Type	Number of Patients (n=170)	Percentage (%)
Spotting	35	20.6
Mild bleeding	40	23.5
Heavy bleeding	30	17.6
Bleeding with abdominal pain	45	26.5
Bleeding with passage of tissue	20	11.8

Table 3

Physical and Ultrasound Findings

Findings	Number of Patients	Percentage (%)
Open cervical os	35	20.6
Subchorionic hematoma	25	14.7
No fetal heartbeat	20	11.8
Ectopic mass on ultrasound	10	5.8
Closed cervical os	80	47.1

Table 4

Diagnoses Made

Diagnosis	Number of Cases	Percentage (%)
Threatened miscarriage	75	44.1
Incomplete miscarriage	30	17.6
Missed abortion	20	11.8
Ectopic pregnancy	25	14.7
Molar pregnancy	20	11.8

Table 5

Pregnancy Outcomes after Bleeding

Outcome	Number of Patients	Percentage (%)
Continued pregnancy without complications	70	41.2
Preterm delivery	30	17.6
Miscarriage	50	29.4
Intrauterine growth restriction (IUGR)	15	8.8
Stillbirth	5	2.9

DISCUSSION

This paper will discuss the case presentations of women who reported to a tertiary care hospital due to hemorrhage during early pregnancy and had a diverse clinical manifestation, cause, and outcome. The findings extend the evidence that hemorrhage in the first trimester is a common yet severe clinical problem that has a variety of predisposing factors and potential outcomes to the health of the mother and the fetus.

A high number of patients (47.1%) were of the age group 20-30 years that reflects the normal reproductive group. However, a significant proportion (more than 40) agrees with other studies done that reveal that older mothers tend to have problems like ectopic pregnancy and miscarriages [1,7]. There were various clinical manifestations with the most common ones being light-bleeding (23.5%) and bleeding combined with stomach pain (26.5%). These symptoms and signs are in accordance with the studies defining a wide spectrum of early pregnancy bleeding including both harmless spotting and dangerous hemorrhages. Approximately 11.8 percent of women identified the passage of tissue, which is the common indicator of an incomplete miscarriage.

The variety of etiologies was also observed as the results of physical examinations and ultrasounds indicated significantly different findings. Open cervical os reflecting active miscarriage is found in 20.6% of women, and subchorionic hematoma, which according to its size and location is suspected to increase the risk of miscarriage, is also present in 14.7% of cases [20]. Ectopic pregnancy with 5.8 percent of instances also shows the importance of early imaging and determining β-hCG. The most frequent diagnostic condition was threatened miscarriage (44.1%) versus incomplete miscarriage (17.6%), missed abortion (11.8%), and molar and ectopic pregnancies (14.7 percent and 11.8 percent, respectively). These data correlate with the existing practices worldwide and should make us pay specific attention to early screening and intervention in order to prevent issues. It can be seen that, although 41,2 percent of pregnancies ended without any complications, there were significant adverse effects as well 29,4 percent of pregnancies ended in miscarriage, 17,6 percent in preterm delivery, and 8,8 percent in IUGR. Although the pregnancy in some instances was progressing at the beginning, the presented results indicate the long-term outcomes of early pregnancy hemorrhage.

CONCLUSION

This research paper notes that early pregnancy bleeding is a typical clinical feature with varied etiology that involves threatened miscarriage, ectopic pregnancy, and molar pregnancy. Though other pregnancies enter into the third

trimester normally, a high percentage may end up in resulting adverse effects on pregnancy outcomes like miscarriage, preterm birth, IUGR or stillbirth. The symptoms should be detected early and properly diagnosed with the help of an ultrasound and 8-hCG level to enhance maternal and fetal outcomes. In the findings, timely intervention and education of the patient should be emphasized to decrease anxiety and improve prognosis in the first-trimester bleeding pregnancy.

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