

Clinical evaluation of first trimester vaginal bleeding

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Abstract

The three major causes of bleeding in first trimester are Abortions, Ectopic pregnancy and Gestational trophoblastic disease. Ultrasound helps in assessing the type of abortion. Life threatening emergency like ectopic pregnancy, when evaluated by ultrasound gives scope for conservative approach without affecting the fertility status. It was a cross sectional study of patients presenting with bleeding per vagina in the first trimester of pregnancy during the study period. Informed consent and ethical committee clearance was taken. In the present study, follow up of clinically diagnosed cases out of 57 cases of suspected threatened abortion, 36 cases continued to term gestation. Only 21 cases were confirmed on sonography. 9 cases of incomplete abortion were misdiagnosed as threatened abortion, 1 case of missed abortion, 10 cases of anembryonic gestation, and 1 case of molar pregnancy were misdiagnosed as threatened abortion.

Keywords: First trimester vaginal bleeding, Sonography, ectopic pregnancy

Introduction

Vaginal bleeding in the first trimester occurs in 20-25% of pregnant women. About half of those who bleed will abort. It is one of the most common obstetric problem and also one of the commonest causes for majority of the emergency admissions to the obstetrics department [1].

History based upon the patient's gestational age and the character of her bleeding, light or heavy, associated with pain or painless, intermittent or constant and clinical examination: Per speculum: Os open or closed, per vaginal: size of uterus, helps the clinician typically make a provisional clinical diagnosis. Laboratory test and imaging technique like ultrasonography are then used to confirm or revise the initial diagnosis. Ultrasound also plays a role of utmost importance in confirming the pregnancy, site of pregnancy, viability, and in predicting whether a pregnancy has a good chance of continuing or it is destined to fail or has already failed [2].

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Ultrasound helps in assessing the type of abortion. Life threatening emergency like ectopic pregnancy, when evaluated by ultrasound gives scope for conservative approach without affecting the fertility status. Ultrasound being non invasive and easily accessible is preferred, though laparoscopy remains the gold standard in diagnosing ectopic pregnancy. Early diagnosis and better management including post evacuation follow up of molar pregnancy and preventing its malignant sequelae can be brought about by sonography. Ultrasound and serum beta HCG titers are complimentary in the follow up [3].

The social phenomena of increasing maternal age predisposing to abortion, general limitation of family size and heightened expectations of normal outcome have produced increased

pressure on the obstetrician, thereby giving more importance to ultrasonography [4].

Methodology

Source of data: The study includes women presenting with a history of bleeding per vagina in the first trimester of pregnancy.

Inclusion Criteria

Women presenting from first day of last menstrual cycle to 12 weeks of gestation with history of bleeding per vagina will be included in the study.

Exclusion Criteria

- Women of reproductive age with a missed period but negative unne pregnancy test.
- Women with bleeding per vagina due to uterine anomaly and pathology.
- Women with more than 12 completed weeks of gestation.

Method of collection of data

It was a cross sectional study of patients presenting with bleeding per vagina in the first trimester of pregnancy during the study period. Informed consent and ethical committee clearance was taken. Clinical details like age, parity, consanguinity, obstetric history, menstrual history and details of present pregnancy in terms of period of amenorrhea, at the time of first episode of bleeding, amount and duration of bleeding whether associated with pain abdomen or not and history of expulsion of fleshy mass /clots were noted. A detailed clinical examination including complete general physical examination, pelvic examination and ultrasound examination was done to arrive at a diagnosis.

Data was collected in a preformed proforma. Clinical diagnosis and ultrasound findings were correlated. Analysis was based on proportions, chi- square test and unpaired t tests.

Results

Table1: Showing the causes of bleeding per vagina in first trimester of pregnancy

Causes	Number	Percentage
Abortion	96	96
Ectopic pregnancy	2	2
Hydatidiform mole	2	2
Total	100	100

The above table and graph shows that the major cause for bleeding per vagina in first trimester is abortion. In our study out of 100 cases 96 cases had abortion as the major cause of bleeding in first trimester, then ectopic pregnancy and hydatiform mole which constitutes 2 cases.

Table 2: Showing disparity between clinical diagnosis and ultrasound diagnosis

Cases	Clinical diagnosis	Ultrasound Diagnosis	Disparity
Threatened abortion	57	40	17
Incomplete abortion	36	35	12
Compete abortion	0	2	2
Missed abortion	4	9	5
Anembryonic gestation	0	10	10
Ectopic pregnancy	2	2	-
Molar pregnancy	1	2	1
Total	100	100	47

The above table and graph shows that out of 57 cases which were clinically diagnosed as threatened abortion only 40 cases were sonographically confirmed as threatened abortion.

There was disparity in 17 cases of threatened abortion. The disparity in case of incomplete abortion was 12 and in missed abortion was 5. 10 cases of Anembryonic gestation and 2 cases of complete abortion was purely a Sonographic diagnosis.

There was no disparity in cases of ectopic pregnancy, in case of molar pregnancy disparity was 1. The total disparity between clinical diagnosis and ultrasound diagnosis was present in 47 cases which was statistically insignificant (P value = 0.8597)

Out of 100 cases, clinical diagnosis was rightly confirmed by sonography in 53 cases indicating total accuracy of clinical diagnosis to be 53%.

Table 3: Showing follow up of cases diagnosed clinically

Cases	No. of cases diagnosed clinically	Follow up and results
Threatened abortion	57	Out of 57 cases 36- pregnancy continued 1 - missed abortion 9-incomplete abortion 10-anembryonic gestation 1 -molar pregnancy
Incomplete abortion	36	Out of 36 cases 29-incomplete abortion 5- missed abortion 2- complete abortion
Missed abortion	4	Out of 4 cases 3- cases were diagnosed as missed abortion
Complete abortion	0	-
Anembryonic gestation	0	-
Ectopic pregnancy	2	Out of 2 cases 2- ectopic pregnancy
Molar pregnancy		Out of 1 case 1 case of molar pregnancy.

In the present study, follow up of clinically diagnosed cases out of 57 cases of suspected threatened abortion, 36 cases continued to term gestation. Only 21 cases were confirmed on sonography. 9 cases of incomplete abortion were misdiagnosed as threatened abortion, 1 case of missed abortion, 10 cases of anembryonic gestation, and 1 case of molar pregnancy were misdiagnosed as threatened abortion.

Out of 36 cases of incomplete abortion which were diagnosed clinically, only 29 were confirmed. 5 cases of missed abortion and 2 cases of complete abortion were misdiagnosed as incomplete abortion. Out of 4 cases of missed abortion diagnosed clinically 3 cases are confirmed., out of 2 cases of ectopic pregnancy both the cases were confirmed and 1 case of molar pregnancy diagnosed on clinical examination was confirmed.

Table 4: Showing Comparison of Clinical, Ultrasound and Final Diagnosis

Parameters	Clinical diagnosis		Ultrasound diagnosis		Final	
	No.	%	No.	%	No.	%
Threatened abortion	57	57	40	40	40	40
Incomplete abortion	36	36	35	35	35	35
Missed abortion	4	4	9	9	9	9
Complete abortion	0	0	2	2	2	2
Anembryonic gestation	0	0	10	10	10	10
Ectopic pregnancy	2	2	2	2	2	2

Molar pregnancy	1	1	2	2	2	2
Total	100	100	100	100	100	100

Images:



Image 1: Anembryonic Gestation



Image 2: Subchorionic Haematoma



Image 3: Theca lutein cyst of ovary with molar pregnancy



Image 4: Incomplete abortion

Discussion

In our study, 100 clinically diagnosed cases with 57 cases of threatened abortion, 36 incomplete abortion, 4 missed abortion, 2 ectopic and 1 molar pregnancy were confirmed on ultrasound examination with disparity of 47% that is, 40 cases of threatened abortion, 35 cases of incomplete abortion, 9 cases of missed abortion, 2 cases of ectopic and 1 case of molar pregnancy were confirmed on ultrasound and 2 cases of complete abortion and 10 cases of anembryonic gestation were diagnosed only on ultrasound. The present study is comparable to T G Ghorade's study ^[5], Anuradha Khanna ^[6], P Reddi Rani ^[2] has got disparity of 68%, 50% and 42% between clinical and ultrasound diagnosis respectively.

In our study all cases of threatened abortion, missed abortion, incomplete abortion, complete abortion, anembryonic gestation and molar pregnancy were diagnosed accurately on ultrasound with accuracy of 100%. The results of present study are comparable with Rama Sofat ^[7] and Neelam S. Bharadwaj ^[5] 1 in diagnosing, missed abortion, incomplete abortion, anembryonic gestation and Hydatidiform mole with 100% accuracy.

In our study 39 cases were managed conservatively as ultrasound showed viable pregnancy, 57 cases underwent instrumental evacuation as they were nonviable and 1 case underwent Laparotomy and 1 case no follow up. A similar study was done by Zhila Amirkhan *et al.*, ^[8] in 2013, 23 cases continued to term, with normal vaginal delivery, 18 cases underwent instrumental evacuation and 25 cases underwent cesarean section.

Conclusion

Ultrasound positively helps in accessing the safe continuation of pregnancy, timely intervention for abnormal pregnancy and avoiding unnecessary intervention in those cases who do not need them.

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