

Clinical and etiological profile of antenatal cases with first trimester bleeding

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Abstract

Background: The first twelve weeks of intra uterine life are the most crucial period which needs a careful eye on the growing fetus inside and if bleeding occurs at this stage, history and clinical examination with investigations will be helpful for management of bleeding. **Aim and objective:** To study the clinical and etiological profile of antenatal cases with first trimester bleeding at a tertiary health care centre. **Methodology:** A prospective study carried out in a tertiary care centre in patients presenting with first trimester bleeding. Data collected was clinical history, clinical examination, investigations underwent and management of the patients. Data was analysed with appropriate statistical tests. **Results and discussion:** ANC cases with first trimester vaginal bleeding have abortion as a major cause, accounting for 87.59% of cases followed by 9.3% of ectopic pregnancy and 3.11% of vesicular mole respectively in our study. 29.84% of patient was having abdominal pain on admission and cervical os was open in 18.99% cases on examination. Tachycardia was present in 8.99% of cases.

Key Word: first trimester bleeding.

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INTRODUCTION

Vaginal bleeding in the first trimester is frequently encountered situation causing anxiety to the patient and obstetrician alike. First trimester is a dynamic period which spans ovulation, fertilization, implantation and organogenesis. 20- 25% of pregnant women will have bleeding during early gestation. This may range from an insignificant episode to life threatening emergency. Before the advent of ultrasonography (USG), these patients were managed only clinically. Bleeding in early pregnancy is an indicator of an abnormality interrupting the normal development. It is a common cause for emergency

admissions. If a diagnosis of the viability or non-viability of pregnancy can be made definitely then, hormonal therapy and hospitalization can be avoided. The various causes of bleeding in first trimester of pregnancy are Abortion (Threatened, Incomplete, Complete, Inevitable, Missed, Blighted ovum), Molar pregnancy and Ectopic pregnancy. Some of the other conditions unrelated to pregnancy like those that are pre-existing or are aggravated by pregnancy like cervical erosion, cervical polyp, ruptured vaginal varicose or cervical carcinoma may also be responsible for bleeding in first trimester. 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 and other diagnostic procedures. This particular study is attempted on rural population, in which problems like lack of health awareness, malnutrition, inadequate investigational or treatment facilities prevail. To study clinical and etiological profile of first trimester.

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Aim and objective: To study the clinical and etiological profile of antenatal cases with first trimester bleeding at a tertiary health care centre

MATERIAL AND METHODS

This is hospital based study on first trimester ANC cases with per vaginal bleeding coming from rural population to tertiary care hospital. In this study 258 women who attended the out-patient clinic in the department of obstetrics and gynaecology in our Hospital with the complaint of bleeding per vaginum in the first trimester pregnancy during December 2017 to October 2019 were included.

Inclusion criteria: 1. First trimester ANC cases coming to ANC OPD or emergency with per vaginal bleeding.

Exclusion criteria: 1. ANC cases more than 12 weeks. 2. Per vaginal bleeding cases more than 12 weeks.

Study was approved by ethical committee of the institute. A valid written consent was taken from patients after explaining study to them. Data was collected with pre tested questionnaire. Data included sociodemographic data like age, residential area etc. clinical history of the patient was taken. History included parity, obstetric history, personal history, medical history, past 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. ANC cases with first trimester bleeding were examined in detail including complete general physical examination and pelvic examination was done to arrive at provisional clinical diagnosis and given a necessary treatment accordingly.

Data was analysed with appropriate statistical tests.

RESULTS

The study was carried out between December 2017 to October 2019. First trimester ANC cases coming to ANC OPD or emergency in labour room from the rural area with per vaginal bleeding were chosen as subjects for study. Total of 1100 cases of first trimester ANC were seen. Out of 1100 cases of first trimester ANC, 258 cases were presented with bleeding per vaginum showing incidence of 23.45%. Table 1 shows majority of the patients in the present study were in the age group of 21 to 30 years of age (62.02%) followed by less than 20 years of age (31.4%) and 31 to 40 years of age (6.58%).

Table 2 shows age wise distribution of different causes of first trimester bleeding in which majority of the patients of all types of abortion comes in age group of 21-30 years followed by age group of \leq 20 years and 31-40 years respectively. In ectopic pregnancy, maximum cases i.e. 15 out of 24 were present in the age group of 21-30 years

followed by 7 cases in 31-40 years age group and only 2 cases were in \leq 20 years age group. Chi square test was applied and p-value is <0.05 which shows given association was statistically significant. Our study revealed that 186 cases out of 258 in our study were multigravida showing 72% incidence with remaining 72 (28%) cases were primigravida. Table 3 shows distribution of cases on the basis of parity. Majority of the patients with first trimester bleeding were multigravida. In threatened abortion, blighted ovum and vesicular mole, majority of patients were primigravida and incidence decreases with parity. In other types of abortion more cases were multigravida. In ectopic pregnancy maximum number of cases i.e. 11 out of 24 were gravida 3 followed by 6 cases of gravida 2 and 5 cases of gravida >4 and only 2 cases were primigravida. Overall, first trimester bleeding was more common in multigravida than primigravida. Chi square test was applied and p-value was < 0.05 showing that above given association was statistically significant.

[χ^2 value – 38.25, p- value – 0.01206] Table 4 shows, there are different causes of first trimester bleeding, in our study abortion was the most common cause comprising of 226 cases (87.6%) which consist of different types of abortions, followed by 24 cases of ectopic pregnancy (9.3%) and 8 cases of vesicular mole (3.11%). other causes of first trimester bleeding was so rare that no cases were we found. In the present study, table 5 shows, out of 258 cases, majority (87.92%) were abortions. Among these the distribution pattern was as follows: Threatened abortion – 34.24%, Missed abortion – 23.35%, Incomplete abortion – 19.06%, Blighted ovum – 7%, Inevitable abortion – 3.5%, Complete abortion – 0.77%. out of remaining cases 9.33% was ectopic pregnancy and 3.11% was vesicular mole. In the present study we found that out of 258 cases of first trimester bleeding maximum cases i.e. 124 (48.06%) found in gestational age of 6-8 weeks. Followed by 66 cases (25.58%) of 8-10 weeks gestation, 50 cases (19.38%) of 10-12 weeks gestation and 18 cases (6.98%) of < 6 weeks gestational age.

Table 6 shows distribution of cases of different causes of first trimester bleeding on the basis of clinical symptoms with which they were presented in emergency. Most the patients of threatened abortion, missed abortion and blighted ovum were presented with spotting per vaginum as only symptom. Only in 13 out of 88 cases of threatened abortion, 2 out of 60 cases of missed abortion and 1 out of 18 cases of blighted ovum, spotting was associated with lower abdominal pain. In complete abortion patients had spotting per vaginum as only symptom. In inevitable abortion, 6 out of 9 cases had moderate vaginal bleeding while remaining 3 cases had clots passing per vaginum i.e excessive PV bleeding. Abdominal pain was present in almost all (8 out of 9) cases of inevitable abortion. In

incomplete abortion 31 cases out of 49 had moderate while 17 cases had excessive bleeding per vaginum. And 36 cases had abdominal pain associated with bleeding per vaginum. In vesicular mole, most of the patients (5 out of 8) had spotting per vaginum as only symptom. In ectopic pregnancy, majority i.e. 22 out of 24 of patients were presented with spotting per vaginum and significant abdominal pain was present in 15 cases i.e.62.5%. Over all abdominal pain was present in 77 cases of first trimester bleeding out of 258 cases comprising of 29.84% while it was absent in remaining 70.16% of cases. On studying signs of these patients we found that Tachycardia (pulse rate >100/min) was present in 10 out of 49 cases of incomplete abortion, 3 out of 9 cases of inevitable abortion, 2 out of 8 cases of vesicular mole and 8 out of 24 cases of ectopic pregnancy. Tachycardia was present in 23 out of total 258 cases of first trimester bleeding comprising of 8.91%. Tachycardia was associated with significant blood loss. On per abdominal examination, abdominal tenderness was present in 36 cases of incomplete abortion (73.46%) while all the cases of inevitable abortion (100%) had abdominal tenderness. Out of 24 cases of ectopic pregnancy 17 cases (70.83%) had abdominal tenderness on examination while 15 cases had guarding and rigidity during to massive hemoperitoneum. Total 69 out of 258 cases of first trimester bleeding had abdominal tenderness comprising of 26.74%. On per vaginal examination,

cervical os was open in 39 cases of incomplete abortion, 9 cases of inevitable abortion and only 1 cases of missed abortion. while in rest of the cases cervical os was closed. 49 out of 258 cases (18.99%) of first trimester bleeding had open cervical os while rest of patients 81.01% had closed cervical os. Cervical motion tenderness and forniceal fullness and tenderness was present in 21 out of 24 cases of ectopic pregnancy i.e.87.5%. and it was absent in rest all the cases of other causes of first trimester bleeding. Culdcentesis was done only in cases of ectopic pregnancy, in other causes of first trimester bleeding it was not done. Out of 24 cases of ectopic pregnancy culdocentesis was positive in 16 cases (66.66%) which were ruptured ectopic in majority. Out of 258 cases of first trimester bleeding, 18 cases (6.97%) were presented to emergency with shock consisting of hypotension, tachycardia, giddiness or sub conscious and severe pallor. In this, 2 (out of 9) cases of inevitable abortion, 9 (out of 49) of incomplete abortion, 1 (out of 8) cases of vesicular mole and 7 (out of 24 cases) of ectopic pregnancy were included. In the present study, table 7 shows, 90 cases were managed conservatively by giving progesterone support and bed rest. Suction and evacuation was required in 86 cases (33.33%) and evacuation with check curettage was done in 58 cases (22.48%). Laparotomy was done in 24 cases (9.31%). Laparotomy with salpingectomy was done in all cases of ectopic pregnancy.

Table 1: Distribution of patients according to age group

Age In Years	Frequency (n)	Percentage (%)
< 20	81	31.4
21 to 30	160	62.02
31 to 40	17	6.58

Table 2: Age wise distribution of causes of first trimester bleeding

Age in Years	Threatened Abortion	Incomplete Abortion	Complete Abortion	Inevitable abortion	Blighted ovum	Missed Abortion	Ectopic Pregnancy	Vesicular Mole
≤ 20	30	14	0	2	6	23	2	3
21 to 30	54	33	2	6	11	34	15	5
31 to 40	4	2	0	1	1	3	7	0

Table 3: Distribution of patients according to parity and causes in first trimester bleeding

Parity	Threatened Abortion	Incomplete Abortion	Inevitable abortion	Complete Abortion	Missed Abortion	Blighted ovum	Ectopic Pregnancy	Vesicular Mole
G1	32	15	0	1	13	7	2	3
G2	25	10	3	1	29	5	6	3
G3	17	17	2	0	15	3	11	2
≥ G4	14	7	4	0	3	3	5	0

Table 4: Distribution of cases according to cause of first trimester bleeding

Cause Of First Trimester Bleeding	Frequency (n)	Percentage(%)
Abortion	226	87.59
Ectopic	24	9.3
V Mole	8	3.11

Table 5: Distribution of patients according to causes of first trimester bleeding

Cause Of First Trimester Bleeding	No of cases(n)	Percentage(%)
Threatened Abortion	88	34.24
Inevitable abortion	9	3.5
Missed Abortion	60	23.35
Blighted ovum	18	7.0
Incomplete Abortion	49	19.06
Complete Abortion	2	0.77
Ectopic Pregnancy	24	9.33
Gestational Trophoblastic Disease	8	3.11

Table 6: Distribution of patients according to symptoms and causes of first trimester bleeding

Symptoms	Threatened Abortion	Inevitable Abortion	Incomplete Abortion	Complete Abortion	Missed Abortion	Blighted Ovum	Ectopic Pregnancy	Vesicular Mole
Abdominal Pain	13	8	36	0	2	1	15	2
PV Spotting	83	0	1	2	55	17	22	5
PV Bleeding	5	6	31	0	5	1	2	2
Passage Of Clot	0	3	17	0	0	0	0	1

Table 7: Distribution of patients according to management in first trimester bleeding

Management	Frequency (n)	Percentage (%)
Conservative	90	34.88
S and E	86	33.33
Evacuation With Check Curettage	58	22.48
Laparotomy	24	9.31

DISCUSSION

In present study, out of 258 cases of first trimester bleeding, 62.02% of the patients were in 21 to 30 years of age group, Similar finding were seen in L.V. Khatod¹ and Deepti kurmi *et al*² studies. Incidence of cases in age group of 21-30 years followed by < 20 years was similar with that of studies conducted by Neelam Gupta *et al*³, Sumathy K.K.⁴, Mamatha Shivanagappa *et al*⁵ and Vidya A. Thobby *et al*⁶. It was seen that 72.09% patients of first trimester bleeding were multi gravida whereas remaining 27.91% were primigravida, the findings were comparable with the results reported by Asha Hanamshetty *et al*⁷, L.V. Khatod *et al*¹, Neelam Gupta *et al*³. Out of 258 cases, 226 (87.59%) had abortion as the major cause of bleeding. The second most common cause was ectopic pregnancy constituting (9.3%) followed by hydatidiform mole (3.11%) respectively. Similar to results of study conducted by Mamatha Shivanagappa *et al*⁵ Present study co-relates well with the findings in the category of threatened abortion, missed abortion, incomplete abortion, ectopic pregnancy, vesicular mole and blighted ovum to that of study conducted by Asha Hanamshetty's⁷. Incidence of inevitable abortion was same with that of study conducted by L V Khatod's¹. Our study co-relates well with the study conducted by Kalyani Singh⁸ for incidence of incomplete abortion, ectopic pregnancy and vesicular mole and with Neelam Gupta *et al*³ for incidence of threatened abortion, blighted ovum, inevitable abortion, ectopic pregnancy and vesicular mole. In present study

majority of incidence of first trimester bleeding per vaginum were present during gestational age of 6-8 weeks comprising 48.06% of cases followed by 25.58% cases in 8-10 weeks. These findings were similar to results of studies conducted by Deepti Kurmi *et al*², L.V.Khatod *et al*¹. In our study, abdominal pain was present in 29.84% of cases with first trimester bleeding per vaginum while it was absent in 70.16%, which is comparable with study conducted by L V Khatod1 *et al*.. In ectopic pregnancy 62.5% cases presented with abdominal pain, finding were similar to Mridula Shrivastav *et al*⁹, Osaheni L Lawani *et al*¹⁰, Dhirajkumar B Shukla *et al*¹¹, Dr. Bandana Pradhan *et al*¹², Neeta Bansal *et al*¹³ studies. Cervical os was open in 18.99% of cases while in remaining 81.01% cases it was closed. This is comparable to the results of study conducted by Mamatha Shivanagappa *et al*⁵ and L V Khatod1. Abdominal tenderness was present in 17 cases of ectopic pregnancy comprising of 70.83% of cases which is comparable to studies of Anuradha Murugesan *et al*¹⁴, Prasanna B *et al*¹⁵, Rashmi A Gaddagi *et al*¹⁶, Trina Karmakar *et al*¹⁷. Cervical motion tenderness and forniceal fullness with tenderness were present in only 8.14% of cases of first trimester bleeding per vaginum and absent in 91.86%, while amongst the cases of ectopic pregnancy cervical motion tenderness and forniceal tenderness were present in 87.5% of cases and absent in 12.5% of cases, findings similar to results of study conducted by Rashmi A Gaddagi *et al*¹⁶ Culdocentesis was positive in 16 out of 24 cases of ectopic pregnancy

showing 66.66% incidence and it was negative in 33.33% of ectopic pregnancy.

Tachycardia was present in 8.91% of cases of first trimester bleeding and absent in 91.09% overall. Ectopic pregnancy associated with tachycardia was present in 29.16% of cases while tachycardia was absent in 70.84%, comparable to studies

conducted by Anuradha Murugesan *et al.*¹⁴ and Trina Karmakar *et al.*¹⁷. Depending on the patient's presentation and general status, treatment was instituted. 34.88% were managed conservatively, whereas 55.81% underwent instrumental evacuation and 9.31% underwent laparotomy, these findings were comparable to results of study conducted by Vidya A Thobbi⁶

CONCLUSION

Incidence of first trimester bleeding in ANC cases was 23.45%. Most common cause of first trimester bleeding was group of abortion followed by ectopic pregnancy and vesicular mole respectively.

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