



A STUDY OF DEMOGRAPHIC DISTRIBUTION AND ULTRASONOGRAPHIC FINDINGS IN PATIENTS WITH FIRST TRIMESTER VAGINAL BLEEDING

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ABSTRACT **Introduction:** Bleeding per vaginam is a common concern for both clinician and the parents to be. Sometimes, it can lead to unexpected hospital admissions and need for urgent ultrasonography. **Aims and Objective:** To study demographic distribution and ultrasonographic findings in patients with first trimester bleeding. **Material And Methodology:** This prospective observational study was conducted at M.L.N Medical college and Hospital, Prayagraj including 204 patients who presented in antenatal OPD and emergency with bleeding per vaginam at less than 12 weeks of gestation for a period of one year. **Result:** In this study, majority of the patients were between 25-29yrs (44.12%), least number of patients above 35yrs (8.82%), majority of the patients were multigravida (73.53%) and from rural area-112(54.90%). It was seen that most of the patients 121(59.31%) had USG findings of threatened abortion. **Conclusion:** Bleeding in first trimester compels frequent hospital visit and hamper the growth of developing embryo.

KEYWORDS : Vaginal bleeding, First trimester

INTRODUCTION

The first trimester of pregnancy is a crucial phase marked by key physiological processes such as ovulation, fertilization, implantation and development of vital organs (organogenesis). Vaginal bleeding in early pregnancy is indeed a common but distressing symptom. For both clinicians & expectant parents, early bleeding often triggers anxiety due to the uncertainty surrounding its cause and potential outcomes.¹ Prevalence of bleeding in first trimester varies, with reported rates ranging from 15% to 25%.^{2,3} There are several reasons of early pregnancy bleeding including obstetric and non-obstetric causes. Obstetric causes include implantation bleeding, threatened abortion, missed abortion, complete abortion, incomplete abortion, gestational trophoblastic disease, ectopic pregnancy and non-obstetric causes include any local cervical or vaginal pathology. Our aim is to observe demographic characteristics of this patients who presented with bleeding at less than 12 weeks of gestation and their USG findings at the time of presentation.

MATERIAL AND METHODOLOGY

An observational study was conducted at department of obstetrics and gynecology, M.L.N Medical college, Prayagraj for a span of one year from April 2023 to March 2024. Patient enrolment was started after approval from ethical committee. All the patients who presented with first trimester bleeding at less than 12 weeks of gestation were the study population. Patient with USG confirmed intrauterine pregnancy and who were willing to participate were included in this study. Pregnant women not willing to participate, all patients >12 completed weeks, molar pregnancy, multiple pregnancies, teenage pregnancy, any congenital anomalies of uterus, any SOL distorting the uterine cavity, local cervical pathology like polyp or erosion and any vaginal lesion causing bleeding, a woman with chronic disease like diabetes, hypertension, bleeding disorder, hepatic diseases and cardiovascular diseases were excluded. The sample size for the present study was calculated as per the following formula $N = 4pq/E^2$ (B.K Mahajan, medical biostatistics, 8th edition) Where p = prevalence of first trimester bleeding, q=1-p, E=Allowable error, from previous study (Amirkhani et al., 2013) it was seen that vaginal bleeding in 15-25% of all pregnancies. For sample size calculation we have taken 15% as prevalence rate for the sake of adequate sample size. Hence p=0.15, q=0.85, at 0.05 allowable error, sample size is given by $n = 4 \times 0.25 \times 0.85 / (0.05)^2 = 204$.

Data Collection Procedure

The information from these patients was documented at antenatal

OPD.

Ethical consideration: The research was initiated after getting the required permission from the institutional ethics committee.

Plan For Data Analysis

The data was validated and inputted into a Microsoft Excel spreadsheet and all analysis was conducted using Microsoft office 2021.

RESULTS:

There were 204 patients out of which majority of the patients belong to younger age group (<30yrs). Among them, 90 (44.12%) patients were belonging to age group 25-29 years which is highest and followed by 54 (26.47%) patients of age group 20-24 years. There were 18 (8.82%) patients of age group more than 35 years following 42 (20.59%) patients of age group 30-34 years. The mean age of patients were 27.53 years with standard deviation 4.39 years and range from 20 years to 42 years.

Table 1: Age And Demographic Distribution (n=204)

Demography	No Of Patients	%age
A) AGE		
1. 20-24 years	54	26.47%
2. 25-29 years	90	44.12%
3. 30-34 years	42	20.59%
4. >35 years	18	8.82%
B) Residence		
1. Rural	112	54.9%
2. Urban	92	45.1%

From table 1, it can be seen that 112 (54.90%) patients were from rural areas while 92 (45.10%) patients were from urban areas.

Table 2: Parity Distribution Of Patients (n=204)

Parity	No Of Patients	%age
Primigravida	54	26.47%
Multigravida	56	27.45%
	48	23.53%
	46	22.55%
Total	204	100.00%

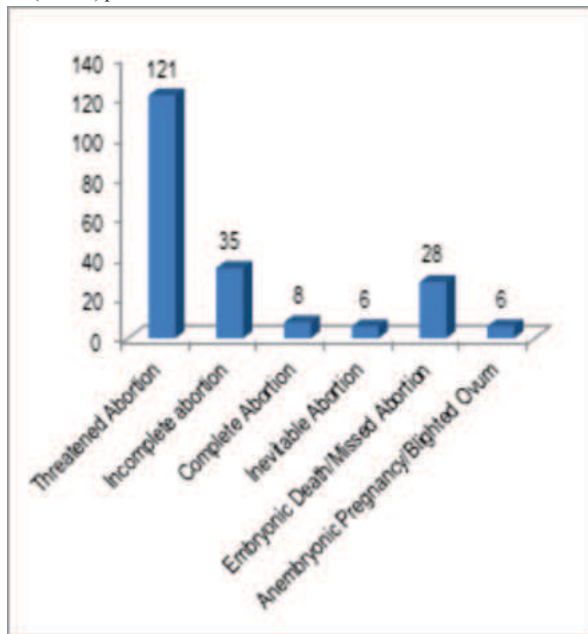
It can be seen that 150 (73.53%) patients were multigravida in which 56 (27.54%) patients were 2nd gravida, 48 (23.53%) patients were 3rd gravida and 46 (22.55%) patients were 4th gravida or more than that. On

the other hand, 54 (26.47%) patients were primigravida.

Table 3: Patients Distribution According To USG Findings (n=204)

USG findings	No Of Patients	%age
Threatened Abortion	121	59.31%
Incomplete abortion	35	17.16%
Complete Abortion	8	3.92%
Inevitable Abortion	6	2.94%
Embryonic Death/Missed Abortion	28	13.73%
Anembryonic Pregnancy/Blighted Ovum	6	2.94%
Total	204	100.00%

In our study, majority of patients 121 (59.31%) had USG finding of threatened abortion followed by 35 (17.16%) patients had incomplete abortion, 28 (13.73%) patients had embryonic death or missed abortion and 08 (3.92%) patients has complete abortion. Additionally, 06 (2.94%) patients had anembryonic pregnancy or blighted ovum and 06 (2.94%) patients had inevitable abortion.



DISCUSSION

In present study, maximum patients with first trimester bleeding were in the early reproductive age group (< 30 years), within which 90 (44.12%) patients belong to 25-29 years age group, 54 (26.47%) patients were of 20-24 years while a small percentage of patients fell within 30-34 years (20.59%) and 8.82% were > 35 years age group which aligns with previous studies, such as study by *Arora S et al.*,⁴ and *Naskar A et al.*,⁷ who also showed that most pregnancies occur in this age group. However, contrasting findings reported by *Arafa et al.*,⁶ where bleeding is mostly seen in women > 33 years of age and more than 90% of the study population were 33 years of age which is similar to the study of *Wijesiriwardana et al.*,⁷

In our study, of the 204 patients, 54.90% were from rural areas, while 45.10% were from urban areas. This rural predominance is likely because most of the patient in medical college came from rural area which mirrors the results of *Bala N et al.*,⁸ In our study, 73.53% patients were multigravida while only 26.47% patients were primigravida. Similar results reported by *Jharaik H et al.*,⁹ The results coincides with the study conducted by *Patel NG et al.*,¹⁰ who also concluded that majority of patients (66%) were multigravida. Even in a study of *Patel S et al.*,¹¹ and *Hasan R et al.*,¹² multigravida patient was noticed 66% and 66.1% respectively.

In contrast, *Ghosh M et al.*,¹³ in their study reported that majority 116 (61.05%) out of 190 were primigravida and rest 74 (38.95%) were multigravida. Similar views also shared by *Kamble PD et al.*,¹⁴ and *Amirkhani Z et al.*,³

All the patients who experienced bleeding during first trimester, undergone ultrasonography (TVS or TAS) to diagnose the cause of bleeding as well as viability. It was found that majority of patients

59.31% had threatened abortion which were managed by adequate rest, oral micronized progesterone supplementation followed by 17.16% patients had incomplete abortion who were managed by dilatation and evacuation, 13.73% patients had embryonic death or missed abortion who were managed by dilatation and evacuation and 3.92% patients has complete abortion managed conservatively. Additionally, 2.94% patients had anembryonic pregnancy and 2.94% patients had inevitable abortion. *Enaruna N et al.*,¹⁵ also found that threatened miscarriage was 44%, 8.3% had complete miscarriage and the others had incomplete or missed miscarriage.

CONCLUSION:

First trimester is the most vulnerable period. Bleeding in this period obligates more frequent prenatal care and they should be referred to equipped medical Centre to reduce the risk of complications.

LIMITATION:

Future scope of research: A multicenter approach including large sample size and study of long duration may confirm the findings of our study. Future research should focus on scoring amount and severity of bleeding.

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