

A Hospital Based Analytical Assessment of Pregnancy Outcome in Patients with First Trimester Bleed

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Abstract

Aim: The aim of the present study was to evaluate whether threatened abortion makes pregnancy high risk and has effect on maternal and neonatal outcome.

Methods: The prospective study was conducted in the Department of Obstetrics and Gynaecology, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India and a total of 200 patients were included in the study, of these, 100 patients had threatened abortion (Group A) and 100 patients were as control group (Group B) without vaginal bleeding during the period of one year.

Results: In our study, in both the groups, maximum number of patients were found in between age group of 20-25 years. Minimum number of patients were found in between the age group of 18-20yrs in group A and >30yrs in group B. 60 patients were multiparous, contributing to the majority in group A. 55 patients were primigravida, contributing to the majority in group B.

Conclusion: Threatened Abortion is an important condition to predict late pregnancy results, both maternal and fetal outcomes. Hence it is necessary to increase the knowledge of pregnant women in this regard for closer care.

Keywords: First trimester bleeding, Pregnancy outcome, Vaginal bleeding

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Introduction

The term 'Safe- Motherhood' is nowadays a slogan. Uterine bleed in early pregnancy is a definite threat to the developing embryo. Vaginal Bleed during the first trimester has been estimated to occur in 15% of all pregnant women. [1] A spectrum of causes for first-trimester Bleed has been Threatened Abortion, Complete Abortion, Incomplete Abortion, Missed Abortion, Gestational

Trophoblastic disease, Ectopic Gestation. In first trimester pregnancies Complicated by bleeding, less than 50% progress normally beyond 20 weeks of Gestation, 10-15% will be an ectopic pregnancy, 0.2% will be a hydatidiform mole, and 30% miscarry, approximately 5% of Women elect to terminate the pregnancy. [2-4] Hence complications occurring during this period pose a diagnostic and management challenge to the obstetrician.

The first trimester of pregnancy is a dynamic period that spans ovulation, fertilization, implantation, and organogenesis. Vaginal Bleed in early pregnancy represents a definite threat to developing embryo and constitutes a source of Anxiety to both the patient and the clinician. Vaginal Bleeding during first trimester has been estimated to occur in 16 to 25% of all pregnant women. [5] Meta-analysis indicate that vaginal bleeding is associated with two-fold increased risk of other complications during pregnancy. [6] In first trimester pregnancies Complicated by bleeding, less than 50% progress normally beyond 20 weeks of Gestation, 10-15% will be ectopic pregnancy, 0.2% will be a hydatidiform mole and 30% miscarry ,Approximately 5% of Women elect to terminate the pregnancy. About 15% of Pregnancies are complicated by Threatened miscarriage. Threatened Abortion has been shown to be associated with an increased risk of poor obstetric outcomes such as preterm labour, Low birth weight and premature rupture of Membranes. Moreover, when pregnant - women have bleeding, it may cause stress and anxiety for the Mother to be about the outcome of pregnancy. This can be a difficult time for women because of uncertainty of outcome, lack of preventive measures and emotional significance of early pregnancy loss. Most agree that adverse pregnancy outcome is associated with first trimester vaginal Bleed. The outcome of ongoing pregnancies after first trimester bleeding is of relevance to women and obstetricians for planning antenatal care and clinical interventions in pregnancy. Definitive diagnosis of First trimester vaginal bleeding is necessary to save the life of the pregnant patient especially in the pathological conditions like ectopic, if not promptly diagnosed can lead to torrential bleeding that can end the life of poor mothers. [7,8]

The important diagnostic action in patients with first trimester vaginal bleeding after

confirmation of positive pregnancy test is Transvaginal sonogram to identify normal or pathological condition to provide early intervention. [7,8] Nearly 50% of pregnancies end in pregnancy loss; if pregnancy continues, poor maternal and fetal outcomes such as preterm delivery [9], preterm premature rupture of membrane (PPROM), preeclampsia, placental abruption and intrauterine growth restriction (IUGR) may occur. [10,11]

The aim of the present study was to evaluate whether threatened abortion makes pregnancy high risk and has effect on maternal and neonatal outcome.

Materials and Methods

The prospective study was conducted in the Department of Obstetrics and Gynaecology, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India.

Inclusion criteria

Bleeding PV in first trimester with closed os and viable products of conception.

Exclusion criteria

1. Ectopic pregnancy
2. Molar pregnancy
3. Bleeding PV beyond 1st trimester
4. Past history of medical disorders
5. Local cervical lesions.

Method of collection of data

Pregnant women with First trimester bleeding were evaluated by clinical history and examination and later subjected to Urine pregnancy testing. Eligible candidates were selected after the exclusion criteria and informed consent was taken from them for participating in the study. All the women fulfilling the inclusion criteria and gave informed consent were included in to the study by multiphasic sampling method. Later the outcome of pregnancy was assessed in the

form of obstetrical complications like placenta previa, PROM, preterm labour, IUD and perinatal outcome like prematurity, low birth weight, low APGAR, NICU admission, perinatal mortality.

A total of 200 patients were included in the study, of these, 100 patients had threatened abortion (Group A) and 100 patients were as control group (Group B) without vaginal bleed during the period of one year.

Statistical analysis

The two groups were compared with Data regarding age, parity, symptoms, obstetric history, examination, co morbidities, pregnancy period, live birth or pregnancy loss, preterm, birth weight and APGAR, investigation findings, associated pathology and treatment modality. They were tabulated and analysed.

Results

Table 1: Social profile of the study subjects

| Parameters | Group A | | Group B | |
|---------------|---------|----|---------|----|
| | N | % | N | % |
| Age in years | | | | |
| 18-20yrs | 10 | 10 | 15 | 15 |
| 20-25yrs | 50 | 50 | 55 | 55 |
| 25-30yrs | 25 | 25 | 20 | 20 |
| >30yrs | 15 | 15 | 10 | 10 |
| Parity | | | | |
| Primigravida | 60 | 60 | 45 | 45 |
| Multigravida | 40 | 40 | 55 | 55 |

In our study, in both the groups, maximum number of patients was found in between age group of 20-25 years. Minimum number of patients was found in between the age group of 18-20yrs in group A and

>30yrs in group B. 60 patients were multiparous, contributing to the majority in group A. 55 patients were primigravida, contributing to the majority in group B.

Table 2: Previous History of Abortions (induced or spontaneous), Number Of abortions

| Parameters | Group A | | Group B | |
|--|---------|----|---------|----|
| | N | % | N | % |
| Previous History of Abortions | 25 | 25 | 20 | 20 |
| Number of abortions | | | | |
| Continued pregnancy | 90 | 90 | 85 | 85 |
| Abortion | 10 | 10 | 15 | 15 |
| Co morbidities developed in present pregnancy | | | | |
| Hypothyroidism | 20 | 20 | 2 | 2 |
| HDP | 12 | 12 | 10 | 10 |
| GDM | 8 | 8 | 11 | 11 |
| placenta previa | 2 | 2 | 1 | 1 |
| IUGR | 10 | 10 | 6 | 6 |
| Fetal anomalies | 3 | 3 | 2 | 2 |
| Abrution(33wks) | 1 | 1 | 1 | 1 |

25% of cases in group A had previous history of abortions where as 20% of cases in group B had this history. Majority of

cases in group A continued pregnancy and 10 patients had abortions contributing to 10%. In the 10% (180patients) who had

abortion, it was noted that majority of patients were multiparous women. Most common co-morbidity developed in group A by patients was hypothyroidism, next common being HDP and GDM. IUGR was seen in 10 patients. Least common was

placenta previa, abruption and fetal anomalies. In group B, most common symptom was HDP and GDM. Hypothyroidism was the least found co-morbidity in group B.

Table 3: Pattern of bleeding

| Bleeding pattern | Group A | | Group B | |
|------------------|---------|----|---------|----|
| | N | % | N | % |
| Spotting | 40 | 40 | 45 | 45 |
| Moderate | 35 | 35 | 30 | 30 |
| Severe | 25 | 25 | 25 | 25 |

Moderate and Severe bleeding was more commonly associated with group A (35% and 25% respectively). Spotting was commonly associated IN group B (45%).

Table 4: Management of pregnant women with first trimester vaginal bleeding

| Management | Group A | | Group B | |
|--------------------------|---------|----|---------|----|
| | N | % | N | % |
| Conservative | 40 | 40 | 42 | 42 |
| Suction and evacuation | 30 | 30 | 28 | 28 |
| Dilatation and curettage | 25 | 25 | 20 | 20 |
| Laparotomy | 3 | 3 | 6 | 6 |
| Laparoscopy | 2 | 2 | 4 | 4 |

Pregnant women with complete abortion and threatened abortion (n=40 in group A and n=42 in group B) were managed conservatively. Pregnant with complete abortion were discharged with haematinics and those with threatened miscarriage were managed conservatively with restricted activity, regular prenatal care.

Discussion

In the first trimester, bleeding is one of the most common obstetric problems. Sometimes it results emergency admissions and unscheduled ultrasound examinations in the first trimester. It is reported that around 25% of all pregnant women complain of vaginal bleeding in their first trimester. [12,13] Approximately, one-third of first trimester bleedings happens in pregnancies. Otherwise normal and no anatomical cause can be established in the majority of pregnancies. [14,15]

This study indicates that women who have vaginal bleeding in the first trimester are at

increased risks of later pregnancy complications; especially preterm delivery, shortened mean pregnancy period, lower gestational fetal weight and preterm rupture of membrane similar to Johns J et al. study. [16,17] Bleeding during first trimester was associated with increased risk of preterm delivery. [9] Because of impaired implantation and invasive trophoblasts, spontaneous abortion may occur in early pregnancy while preterm delivery, PPROM, placental abruption and preeclampsia may happen in later period. [18,19] Our results were similar to those reported before by Hossain et al. [9] Because of increased free iron deposits from subchorionic bleeding, hydroxyl radical is catalyzed damaging the membranes leading to spontaneous abortions similar to Edwards et al. study. [20]

In the present study it was observed that majority of patients were in the age group 21 to 30 years and 40% in group A and 55% in group B were multigravidas and

perhaps the reason is that majority of delivery also occur in this age group. Previous history of abortion was observed among 46 (38.3%) of multigravida subjects, of which 36.9% had viable pregnancy and 63.1% had non-viable pregnancy. In the study done by Zhila Amir Khani et al also observed similar pattern of observations, that among pregnant women with first trimester bleeding 53.3% were in the age group 25 to 35 years. [21] 15% had history of previous abortion and 33.3% had previous history of bleeding during pregnancy. Spotting was observed in 40%, moderate bleeding was observed in 35% and severe bleeding was observed in 25%. Reem Hasan et al in their study also observed similar pattern that majority of subjects were in the age group 28 to 34 years (45.9%), 34.8% were primipara and 17.7% were multipara. Spotting was seen in 75.6% of subjects, light bleeding in 18.4% and 6.1% had heavy bleeding. [22] The risk of developing co-morbidities was seen in present pregnancy with patients having threatened abortion, similar to Yang et al. study. [23]

Basama FM et al in their study observed that parity, previous miscarriage, the amount and number of episodes of vaginal bleeding seem to have no influence in the rate of miscarriage. Similarly, in the present study there was no significant association between previous bad obstetric history and bleeding. [24,25]

Conclusion

Threatened Abortion is an important condition to predict late pregnancy results, both maternal and fetal outcomes. Hence it is necessary to increase the knowledge of pregnant women in this regard for closer care. Especially for those who had previous bad obstetric history and also initiation of early antenatal care for Primigravida for early recognition of high-risk cases. It is also important factor for clinician to be attentive towards first trimester bleeding in providing clinical

interventions for the continuation of pregnancy and also reducing the fetal complications in these high-risk pregnancies. Knowledge of this increased risk may also facilitate decision making regarding management, mode, place and time of delivery which will inevitably improve pregnancy outcome.

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