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Prospective study of pregnancy outcome in patients with first trimester bleed in a tertiary centre

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Abstract

Introduction: First trimester bleed is common symptom of pregnancy, complicating 16-25% of all pregnancies. Nearly 50% of pregnancies land up in abortions and the rest land up with poor maternal and fetal outcomes.

Aims and Objectives: To evaluate whether threatened abortion makes pregnancy high risk and has effect on maternal and neonatal outcome.

Materials and Methods: It is a prospective study done at hospitals attached to BMCRI during August 2015-August 2017. A total of 300 patients were included in the study, of these, 150 patients had threatened abortion (Group A) and 150 patients were as control group (Group B) without vaginal bleed. 2 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: Incidence of preterm delivery, abortions, low fetal weight, and PROM was increased in threatened abortion group. Mean pregnancy period was in threatened miscarriage group was 243 days; in control group was 263 days. There was adverse influence of maternal age and abortion history on outcomes in pregnancies with threatened miscarriage. However sex of the fetuses and Apgar values after 1 and 5 minutes were similar between two groups.

Conclusion: Threatened miscarriage is an important situation to predict both the maternal and fetal outcomes in late pregnancy. Maternal obstetric history on previous pregnancies should be questioned. It is therefore essential to consider these pregnancies as high risk group and provide careful antenatal care.

Keywords: Threatened abortion, preterm delivery, PROM, PPROM, USG

Introduction

First trimester bleeding is a common symptom of pregnancy, complicating 16%-25% of all pregnancies^[1, 2]. The four major sources of non-traumatic bleeding in early pregnancy are ectopic pregnancy, miscarriage (threatened, inevitable, incomplete or complete), implantation of pregnancy and cervical pathology^[3].

Threatened Abortion

Definition

It is a condition where the process of abortion has started but has not progressed to a state from which recovery is impossible^[4].

Clinical features^[5]

1. Slight bleeding per vagina
2. Mild pain abdomen

On examination

P/S-Minimal bleed through os

P/V- os closed, uterus corresponds to POG

Diagnosis

1. Threatened abortion is diagnosed as first trimester vaginal bleeding with closed cervix and confirmed with fetal heart rate on ultrasound^[4, 5].
2. Serum progesterone value more than 25ng/mL- 95% viable pregnancy

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Nearly 50% of pregnancies end in pregnancy loss; if pregnancy continues, poor maternal and fetal outcomes such as preterm delivery [4], preterm premature rupture of membrane (PPROM), preeclampsia, placental abruption and intrauterine growth restriction (IUGR) may occur [1,5].

Aims and Objectives

To evaluate whether threatened abortion makes pregnancy high risk and has effect on maternal and neonatal outcome.

Materials and Methods

It is a prospective study done at hospitals attached to BMCRI during August 2015-August 2017. A total of 300 patients were included in the study, of these, 150 patients had threatened abortion (Group A) and 150 patients were as control group (Group B) without vaginal bleed. 2 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.

Exclusion criteria

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

Inclusion criteria

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

Results

Age Distribution

Group A

Age	Number
18-20yrs	16
20-25yrs	74
25-30yrs	40
>30yrs	20

Group B

Age	Number
18-20yrs	20
20-25 yrs	80
25-30 yrs	35
>30 yrs	15

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

Parity Distribution

Group A.

Multigravida	90
primigravida	60

Group B

Multigravida	70
primigravida	80

90 patients were multiparous, contributing to the majority in group A

80 patients were primigravida, contributing to the majority in group B

Presenting Symptoms

Group A

vaginal bleeding	106
Spotting	28
pelvic pain	16

Most common symptom seen was vaginal bleeding followed by spotting per vagina only 16 patients had pelvic pain

Previous History of Abortions (induced or spontaneous)

Group A	Group B
39cases out of 150 cases (26%)	40cases out of 150 cases (20%)

26% of cases in group A had previous history of abortions where as 20% of sases in group B had this history

Number Of abortions

Group A

continued pregnancy	132
Abortion	18

Majority of cases in group A continued pregnancy and 18 patients had abortions contributing to 11.7%.

In the 11.7% (18 patients) who had abortion, it was noted that majority of patients were multiparous women

USG

USG done for all patients with threatened abortion (GROUP A)

- 32 (21%) patients had sub-chorionic bleed –4(11%) patients with sub- chorionic bleed had abortion
- The rest had no sub-chorionic bleed

Treatment Given

- Adequate rest
- Micronized progesterone vaginal / oral route
- USG for follow up after 10-15days.

Co morbidities developed in present pregnancy

Group A

	No Of Patients
hypothyroidism	29
HDP	17
GDM	13
placenta previa	3
IUGR	14
Fetal anomalies	5
Abrution(33wks)	1

Group B

	No of Patients
hypothyroidism	2
HDP	10
GDM	15
IUGR	6
Anomalies	2

Most common co-morbidity developed in group A by patients was hypothyroidism, next common being HDP and GDM. IUGR was seen in 14 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.

Time of Delivery of Continued Pregnancies

Group A

24-28wks	18
28-34 wks	33
34-37 wks	75
>37 wks	6

Among the continued pregnancy, 75 patients delivered at 34-37wks, contributing to the highest number in group A. 33 patients delivered at 28-34wks, which is the next highest group. Term delivery was 6.

Group B

24-28 wks	4
28-34 wks	12
34-37 wks	15
>37 wks	119

Among the continued pregnancy, 119 patients delivered at term, contributing to the highest number in group A. 12 patients delivered at 28-34wks.

Higher rates of preterm deliveries in group A (34%) when compared to group B (11%).

PPROM and PROM rates

Group A		Group B	
PPROM	12 patients	PPROM	6patients
PROM	21 patients	PROM	5patients

PPROM (12) and PROM (21) rates was higher in Group A (22%) than in Group B (7%).

Birth Weight of Babies

Weight Of Babies	Number Of Patients	
	Group A	Group B
1-1.5kg	22	7
1.6-2kg	29	27
2.1-2.5kg	32	15
2.6-3kg	40	25
3.1-3.5kg	10	55
>3.5kg	17	21

- 55.2% of cases had low birth weight babies in group A than 32.6% in group B
- However APGAR score in 1st and 5 min did not change in both groups

Discussion

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 [6, 7]. similar to Johns J *et al.* study.

Bleeding during first trimester was associated with increased risk of preterm delivery [4]. 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 [8, 9]. Our results were similar to those reported before by Hossain *et al.* [4]. 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 [10].

Subchorionic hematoma can result in a nidus which may become infected and cause preterm rupture of membranes [11]. In Saraswat *et al.* study similar results were demonstrated for PPROM [3].

Increase risk of threatened abortion was seen more in multi parous women (60%) in our study, similar to Rosen *et al.* study [12]

The risk of developing co-morbidities was seen in present pregnancy with patients having threatened abortion, similar to Yang *et al.* study [13]

Conclusion

Threatened Abortion is an important condition to predict late pregnancy results, both maternal and fetal outcomes. It is therefore acceptable to consider these pregnancies as high risk group for which antenatal care should be performed carefully.

Limitations

- Small sample size
- Amount of bleeding and characteristics had subjective variation
- Low birth weight could be associated with other co-morbidities that they developed later in pregnancy like HDP.

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