

Pregnancy outcome in women with first trimester bleed- A prospective study in a tertiary care hospital

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Abstract

Background: 15% of Pregnancies are complicated by Threatened miscarriage. It is shown to be associated with an increased risk of poor obstetric outcomes such as preterm labour, Low birth weight and premature rupture of Membranes. **Aim:** To assess the Pregnancy outcome in women with Threatened miscarriage in First Trimester and to compare the pregnancy outcome in women with or without threatened first trimester bleed out of the hospital attendance and domiciliary management. **Methods:** In this prospective cohort study, cases of threatened miscarriage were examined from the first trimester and followed up prospectively until the end of pregnancy. The sample size was 400, 200 pregnant women in the threatened miscarriage group and 200 controls and adverse pregnancy outcomes among the two groups were then compared. **Results:** Threatened abortion is associated with an increased risk of pregnancy-related complications namely placental abruption, preterm labour, Low Birthweight babies, Premature Rupture of Membranes. **Conclusion:** It is evident that the majority of women with first trimester bleeding have pregnancy outcomes comparable to those without such bleeding, but they face a higher relative risk of some adverse obstetric and neonatal outcomes. **Key Words:** Threatened miscarriage, preterm labour, first trimester.

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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 Threatened Abortion is a term that applies to women who are at less than 20 weeks Gestation with a viable pregnancy and have vaginal spotting or bleeding, a closed cervical os and possibly mild uterine cramping. The Prognosis of threatened Abortion is very unpredictable whatever method treatment is employed either in the hospital or at home.⁵ Since the knowledge of increased risks associated with the first-trimester Bleed may facilitate decision making regarding management and decisions regarding mode, place, and timing of delivery.

INTRODUCTION

The term 'Safe- Motherhood' is nowadays a slogan. Uterine bleed in early pregnancy is a definite threat to developing the 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 bleed less than

MATERIALS AND METHODS

The patients were followed up prospectively from examination in the first trimester until the end of pregnancy. Pregnant women who seek hospital assessment for vaginal bleed less than 12 weeks of Gestation are the subjects for study with a view to evaluating the outcome of pregnancy following close

antenatal and intranasal and postnatal supervision. The cases were selected from the inpatient department. In one year of period 200 cases were selected as the study group. After informed consent, women were recruited into the study. The Control group consisted of age-matched women who booked for antenatal care in the hospital during the same time period. They were identified consecutively matched for maternal age, from the obstetric - ultrasound database as having attended for routine first-trimester screening. Control cases were excluded if they had attended the early pregnancy Unit with threatened miscarriage in the first trimester or if they gave any history of first trimester bleeding. The sample size was 400, 200 pregnant women in the threatened miscarriage group and 200 controls. All women in the study group were followed prospectively from their first appointment until delivery. The Characteristics of all the patients related to their age, gravidity, the period of Gestation, Ultrasonic results, duration of Bleed, duration of hospital stay, treatment modalities and outcome were determined, and data were collected through self-administered structured questionnaire. Outcome data were obtained from the hospital notes and confirmed by telephone follow up wherever necessary. Potential confounding factors have identified an adjustment was made in the statistical models. The potential confounding factors included maternal age, gravidity, and previous recurrent abortion, previous preterm delivery, previous induced abortion, previous term delivery, previous pregnancy with a chromosomal abnormality previous pregnancy with a genetic abnormality and use of assisted reproduction technology. The sample population was limited to primigravida and second gravida to minimize the potential confounding effect of parity. Women presenting with complete, incomplete and missed abortions were excluded. Women opting for termination, Women with multiple pregnancies were excluded from the study group. Women with fetal malformations or hydatidiform Moles were excluded. Women who had a second-trimester miscarriage were also excluded. Women were seeking hospital assessment for vaginal Bleed <12 weeks of Gestation were included. Those women should not be on any drugs for hematological problems. The Pregnancy and Delivery complications like antepartum Hemorrhage (Placenta Previa and Abruptio placenta) Eclampsia, Preeclampsia, Premature Rupture of Membranes, Low Lying Placenta, and Pregnancy outcome, Mode of Delivery, Manual Removal of

Placenta, Post-Partum Hemorrhage and Low Birth Weight were determined and the outcome data obtained.

RESULTS

In this study 200 cases were taken into consideration which was collected from the inpatient department of Government Kasturba Gandhi Hospital, Chennai. Out of 200 cases with threatened miscarriage, 79.5% of cases were primigravida, and 20.5% of cases were multigravida. But a statistically significant difference between the case and control in this study was not noted. (Figure 1) Out of 200 cases with threatened miscarriage 11.0% of cases had the history of previous abortion and 12% of Control group had the history of previous abortion. So no significant association (P.875) is found between vaginal bleed and history of previous abortions. (Figure 2) Out of 200 cases with threatened miscarriage 5% of cases had signs and symptoms of preeclampsia as compared with 7.5% in the control group. (Figure 3) Out of 200 cases with the first-trimester bleed, 6.0% of cases had abruptio placenta as compared with 0.5% of Control. A statistically significant association between vaginal bleeding and Abruptio placenta was found. (Figure 4) Out of 200 patients, 6.5% of patients with threatened miscarriage had premature rupture of membranes as compared to 1% in the control group. (Figure 5) Out of 200 cases with first trimester bleed only 3% had low lying placenta. (Figure 6) In our study, the statistically significant association between study and control subjects was noted (P=0.049). Out of 200 cases with threatened miscarriage 32 cases had preterm delivery and that is around 16.0% as compared with 9.0% in the control group. (Figure 7) Out of 200 patients with the first-trimester bleed, 11.5% of cases had manual removal of placenta done as compared to 7.5% of control subjects. No statistically significant association between the case and control could be demonstrated in our study. (Figure 8) Out of 200 patients with first trimester bleed 5.5.% of patients had post-partum Hemorrhage as compared to 3.5% of control. No significant association could be found between case and control in postpartum hemorrhage. (Figure 9) Out of 200 patients 18% of patients with threatened miscarriage delivered babies with birth weight of <2500gm as compared with 4% of patients in control. A statistically significant association between patients with first-trimester bleed and low birth weight could be demonstrated in our study. (Figure 10).

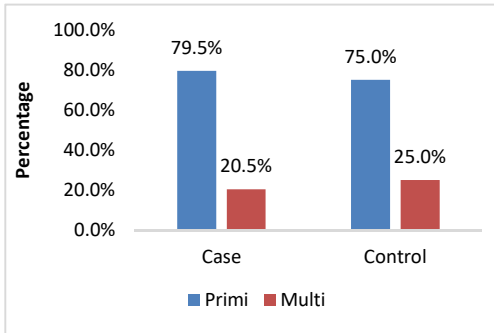


Figure 1

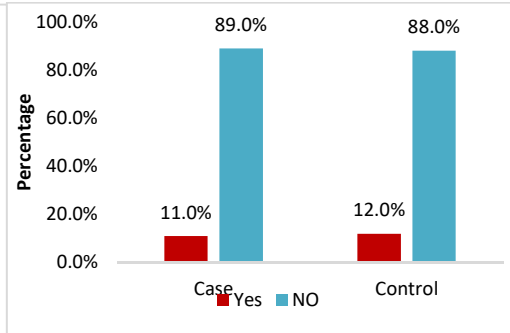


Figure 2

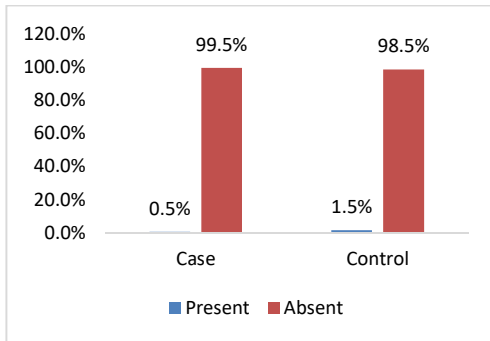


Figure 3

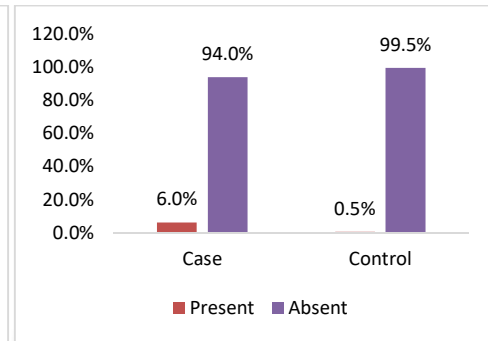


Figure 4

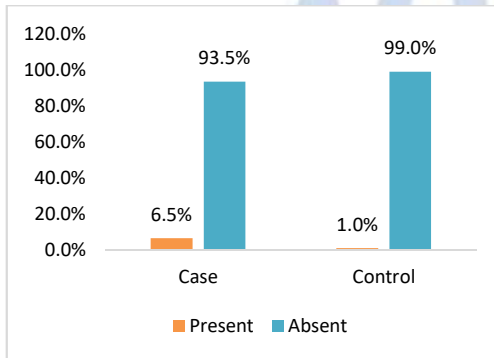


Figure 5

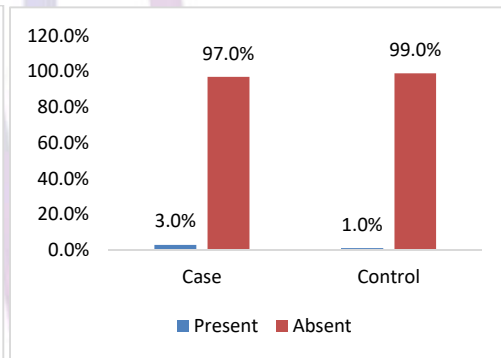


Figure 6

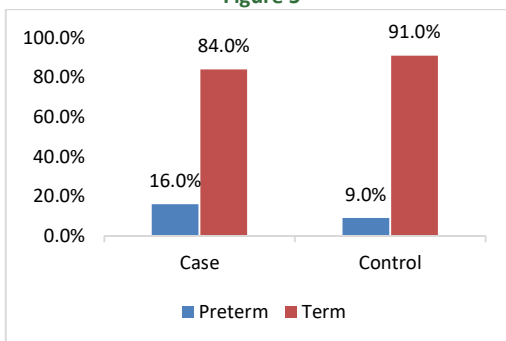


Figure 7

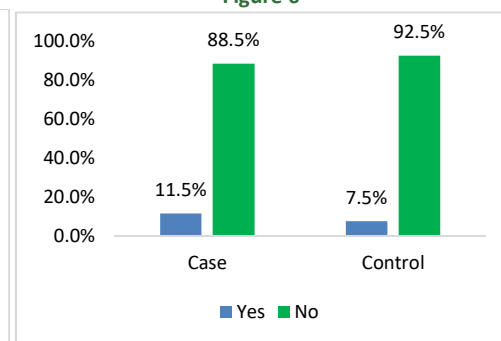


Figure 8

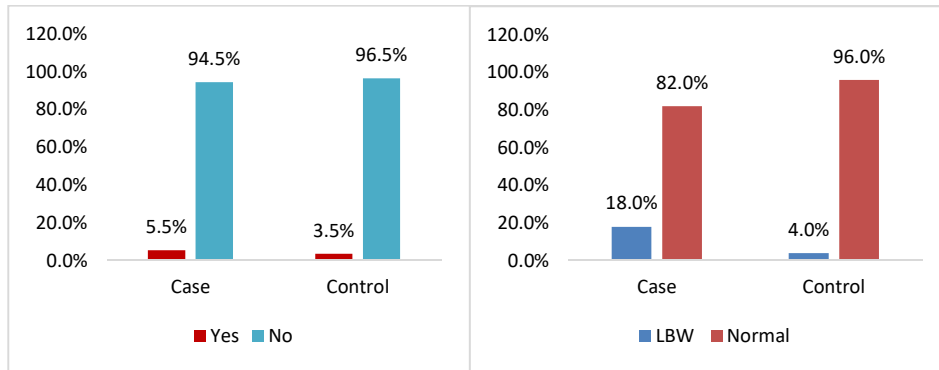


Figure 9

Figure 10

Figure 1: Comparison of cases and controls by Gravida; Figure 2: Comparison of cases and controls by previous abortion; Figure 3: Presence of Eclampsia among cases and controls; Figure 4: Abruption placenta among cases and controls; Figure 5: PROM Among cases and controls Figure 6: Low lying placenta among cases and controls; Figure 7: Pregnancy outcome in cases and control; Figure 8: Manual Removal of placenta among cases and controls; Figure 9: Postpartum haemorrhage among cases and controls; Figure 10: Low birth weight among cases and controls

DISCUSSION

First – Trimester vaginal bleeding affected up to 25% of all pregnancies and reported to spontaneous miscarriage in 50% of affected women. These data showed that threatened miscarriage is not only associated with miscarriage but also associated with adverse pregnancy outcome. Results from this study confirm findings from other authors that threatened abortion is associated with an increased risk of certain pregnancy-related complications namely placental abruption, preterm labour, delivery of Low Birthweight babies, Premature Rupture of Membranes. Results of this study support evidence to indicate that in some patients first trimester vaginal bleeding may indicate underlying placental dysfunction which manifests in later pregnancy by an adverse outcome that has been related to placental dysfunction. Basama FM *et al.* found that previous miscarriage has no influence in the outcome of Threatened miscarriage.⁶ In one study by Weiss JL *et al.* increased the risk of preeclampsia preterm delivery/placental abruption and caesarean delivery was observed for patients who reported light bleeding. For patients who reported heavy vaginal bleeding during the first trimester they observed increased risks of IUGR, Preterm delivery, PPRM, Placental Abruption, and caesarean delivery. In our study increased the risk of preterm delivery, PROM, Abruption placenta and LBW was observed in patients with the first-trimester bleed. In 1993, Verma *et al.* reported that pregnancy-induced hypertension was significantly more common in subjects with threatened abortion and a viable pregnancy compared with subjects without vaginal bleeding 6% Vs. 4.7% respectively; $p < 0.05$.⁸ Das *et al.* reported an increased risk for a low lying placenta among women with threatened miscarriage but found no difference in placental location compared

with control subjects by 36 weeks of Gestation.⁹ Out of 200 cases with the first trimester bleeding only 3% had low lying placenta. Preterm delivery before 37 weeks gestation occurs in 7-11% of pregnancies but is responsible for 85% of deaths of normally formed infants. Despite significant advances in perinatal medicine the incidence of preterm delivery has remained unchanged. The only potential risk factor found to be associated significantly with the risk of preterm delivery in women with a threatened miscarriage was unexplained antepartum hemorrhage rather than other factors such as premature rupture of membranes. Batzofin *et al* and William *et al.* reported that patients with threatened miscarriage had double the risk of preterm delivery compared with patients without bleeding. The study of Williams *et al.* was limited to first trimester bleeding.^{1,10} Batzofin *et al.* included patients with bleeding up to 20 weeks.¹ Hertz JB. Heisenberg (1985) reported that Retention of placenta was associated with threatened miscarriage and the rate of manual removal was 14% they postulated that adhesive scarring between the uterine wall and the placenta at the site of bleed might be responsible for the increased incidence of retention of the placenta in women with threatened miscarriage.¹¹ Haddow *et al.* reported an increased risk for Low birth weight (<2500g) in pregnancies that were complicated by vaginal bleeding.

CONCLUSION

There is no specific treatment for threatened abortion. Bed rest although often advocated is not effective. No consistent evidence shows that bed rest can affect pregnancy outcome in threatened abortion.

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