

## Outcome of Pregnancy Complicated by Threatened Abortion in Dhaka National Medical College and Hospital

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### Abstract :

**Introduction :** Pregnancies complicated by threatened abortion constitute a risk group requiring careful obstetric and perinatal supervision and follow-up.

**Objective :** The purpose of this study was to evaluate the risk factors and adverse pregnancy outcomes with threatened abortion.

**Methods :** The prospective study was conducted in Obstetrics and Gynecology Department in Dhaka National Medical College Hospital from 1<sup>st</sup> July, 2011 to 31<sup>st</sup> December, 2013. Pregnant women presenting with per vaginal bleeding admitted before 24 weeks were included in this study group. Diagnosis of threatened abortion was confirmed from history, clinical examination & ultrasonic finding of alive fetus. We followed up all the women from their first appointment until delivery and outcomes were determined.

**Results :** In this study 69% pregnant woman with threatened abortion were multigravida. Out of 100 pregnant women, 32 cases of pregnancy ended with abortion and rest 68 cases could continue pregnancy. Among the 68 cases, 57.35% neonate were pre-mature, 54.41% low birth weight, 17.65% neonate presented with respiratory distress syndrome and 13.23 % intra uterine growth retardation and 4.41% developed intra uterine death. Ultrasonographic study of pregnant women showed, 19% patients ended with incomplete abortion and 13% missed abortion. Among the 68 cases 13.23% were placenta praevia and 7.35% were placental abruption.

**Conclusion :** Threatened abortion was associated with an increased incidence of adverse pregnancy outcomes and most commonly associated with abortion, pre-maturity, low birth weight, and intra uterine growth retardation and intra uterine death. Pregnancy with threatened abortion who continued had increased risk of low lying placenta, placenta praevia, and placental abruption.

**Key Word :** Threatened Abortion.

### Introduction :

Threatened abortion defined as vaginal bleeding before 24 weeks gestation, is a common complication affecting 15-20% of viable pregnancies<sup>1</sup>. It is associated with an increased risk of poor obstetric outcomes such as preterm labor, low birth weight, and premature rupture of membranes.<sup>2</sup> Uterine bleeding during pregnancy represents a definite threat to the developing embryo and is often followed shortly by termination of the gestation<sup>3,4</sup>. Clinical diagnosis of threatened abortion was presumed when any bloody discharge or vaginal bleeding appears during first half of pregnancy. Fifty percent of women with vaginal bleeding in 1<sup>st</sup> trimesters of pregnancy

abort and 50% continue pregnancy<sup>3</sup>. The diagnosis of threatened abortion is frequently made in clinical practice by a taking history of vaginal spotting and the finding of a closed cervix in vaginal examination. A definitive diagnosis of threatened abortion should be made following ultrasonographic examination confirming the presence of fetal heart activity in an intrauterine pregnancy<sup>5</sup>. Vaginal bleeding during early pregnancy most often originates from the placenta. The main reasons for vaginal bleeding in early pregnancy are subchorionic hemorrhage, subchorionic haematoma and rupture of a marginal placental sinus<sup>6</sup> It is thought that bleeding between the chronic membrane and the



uterine wall can result in a spectrum of effects on pregnancy development and outcome. At one end, direct pressure and disruption of the placental bed can result in abortion. At the other end of the spectrum is placental abruption, placenta praevia, prematurity, preterm rupture of membranes, low birth weight and fetal death.<sup>7</sup> This study was conducted to find out the adverse pregnancy outcomes and also risk factors in mothers with threatened abortion.

#### Materials and Methods :

This prospective study was done in the Departments of Obstetrics and Gynaecology in Dhaka National Medical College and Hospital from 1<sup>st</sup> July, 2011 to 31<sup>st</sup> December, 2013. Pregnant women presenting with per vaginal bleeding admitted before 24 weeks were included in this study group. Pregnant woman with large leiomyomata, distorting the uterus, cervical erosion, bleeding disorders, cardiac disease, diabetes mellitus, cervical cancer, cervical polyp, hepatic disease, pre-eclampsia, eclampsia were excluded. Diagnosis of threatened abortion was confirmed from history, clinical examination and ultrasonic finding of alive fetus. We followed up all women from their first appointment until delivery. The characteristics of all the patients related to their age, gravidity, period of gestation, socioeconomic status, ultrasonic results and out comes were determined. Baseline data were recorded through self administered structured questionnaire and patient interview. Pregnancy outcomes were recorded like as prematurity, intra uterine growth retardation, and intra uterine death. Following risk factors were searched like low lying placenta, placental abruption, placenta praevia. Pre-term delivery was depicted as birth before 37 weeks gestation, Intra uterine growth retardation define as birth weight of <10<sup>th</sup> percentile for gestational age. Immediate fetal outcome was measured by APGAR scores at 5<sup>th</sup> minute <7. Placental abruption (premature separation of a normally implanted placenta), placenta previa (placenta completely or partially covering the internal os), and low lying placenta (placental edge actually does not reach the internal os but is in close proximity to it). Primary outcome measures were abortion and continuation of pregnancy till delivery.

#### Results :

Present study included 100 pregnant women with history of threatened abortion. This study showed 59% women were between 21 to 30 years of age and most of the families (53%) income was low. Sixty nine percent (69%) women were multigravida and 40% patients of threatened abortion were

presented at less than 12 weeks of pregnancy and 08% had history of previous abortion (Table I). Ultrasonographic examination of pregnant women showed 68% had fetal cardiac activity, 19% patients were incomplete abortion and 13% missed abortion. Low lying placenta seen in 15% cases. (Table II). Obstetric outcome of pregnant women with threatened abortion, 45% underwent caesarean section during delivery, 32% pregnant women ended up as abortion. Normal delivery was occurred only in 23% cases (Table III). Among the 68 cases, 57.35% neonate were pre-mature, 54.41% low birth weight, 17.65% neonate presented with respiratory distress syndrome, 13.23 % intra uterine growth retardation and 4.41% intra uterine death. Placenta praevia were found in 13.23% and abruption placental 7.35% cases. (Table IV).

**Table I.** Demographic characteristics of pregnant women with threatened abortion

Characteristics	Case n=100 (%)
Age( in Years)	
<20	31 (31%)
21-30	59(59%)
31-40	11(11%)
Family income per month	
Very Low Income (<5000 Tk)	11(11%)
Low Income (5000-<10000 Tk)	53(53%)
Middle Income (10000-20000 Tk)	21(21%)
High Income (>20000 Tk.)	15(15%)
Gravida	
Primi	31(31%)
2-3	17(17%)
4-5	43(43%)
6 and Above	09(09%)
Period of gestational age in weeks at the time of admission	
<12	40 (40%)
13-16	39 (39%)
17-20	13 (13%)
21-24	08 (08%)
Previous abortion	8 (08%)
Gestational age at birth (weeks)	35.72±4.4

**Table II.** Ultrasonographic examination of the pregnant women with threatened abortion after subsequent visit

Ultrasonographic study	Case n=100 (%)
Early pregnancy (<24 weeks) with fetal cardiac activities	68(68%)
Abortion	
Incomplete abortion	19(19%)
Missed abortion	13(13%)



Ultrasonographic study	Case n=100 (%)
Early pregnancy (<24 weeks) having low lying placenta	15(15%)

**Table III.** Obstetric outcome of the pregnant women with threatened abortion

Outcome	Cases (n=100)
Caesarean delivery	45 (45%)
Normal Delivery	23(23%)
Abortion	32 (32%)

**Table IV.** Out comes of pregnancy who continued pregnancy (n=68)

Outcome	Cases (n=68)
Delivery	
Term Delivery	29 (42.65%)
Preterm delivery	39(57.35 %)
Placenta previa	09 (13.23%)
Placental abruption	05 (7.35%)
Birth weight	
Low birth weight	37(54.41%)
Normal Birth Weight	22 (32.35%)
Intra-uterine fetal distress	13 (19.11%)
Respiratory distress syndrome	12(17.65 %)
Intra uterine growth retardation	09 (13.23 %)
Perinatal asphyxia	04(5.88%)
Intra uterine death	03(4.41%)
Meconium aspiration syndrome	02(2.94%)

### Discussion :

Threatened abortion is the most common complication in the first half of pregnancy. The present study included 100 pregnant women with threatened abortion and showed 59% women were between 21 to 30 years of age, most of the families (53%) income was low, 69% women were multigravida. Forty percent patients of threatened abortion had been presented at less than 12 weeks of pregnancy. Khanam et al<sup>8</sup> found that 48% patients of threatened abortion had been presented at less than 12 weeks of pregnancy. Present study showed 45% had to gone through caesarean section during delivery and 32% pregnant women ended with abortion. Batzofin et al<sup>9</sup> found increase risk of caesarean delivery. Tanha et al<sup>10</sup> found no association between threatened abortion and risk for caesarean delivery. The pregnancy outcomes for woman with threatened abortion showed that most of the patients (57.35%) had pre-mature delivery. Batzofin et al<sup>9</sup> and Williams et al<sup>11</sup> reported that patients with

bleeding had double the risk of preterm delivery compared with patients with no bleeding. Present study showed 54.41% had low birth weight. Mustafa et al<sup>12</sup> found 23.4% babies were born with low birth weight with threatened abortion. Haddow et al<sup>13</sup> reported an increased risk for low birth in pregnancies that were complicated by vaginal bleeding. These difference may be due to the fact that more preterm delivery occurred in this study. Since preterm delivery was associated with threatened abortion, identifying women who was at high risk for preterm labour was important. It could be speculated that the presence of blood after threatened abortion, with the disruption of the chorioamniotic space and the resultant chronic inflammatory reaction, might precipitate preterm labour. Intra uterine growth retardation was found 13.23 % cases in present study. Perera et al<sup>14</sup> found 8.2% intra uterine growth retardation in there study. In this study neonate presented with respiratory distress syndrome (17.65 %) probably due to preterm and low birth weight neonate delivery. Perinatal asphyxia (5.88%) and meconium aspiration syndrome (2.94%) probably due to intra-uterine fetal distress. This study showed 13.23% placenta previa. Placenta previa is common cause of obstetrical vaginal bleeding. Bleeding in the 1<sup>st</sup> half of pregnancy could be a reflection of pregnancy<sup>15</sup>. Das et al<sup>16</sup> reported an increased risk for low lying placenta among patients with threatened abortion. Placental abruption was found in 7.35% and 4.41% intra uterine death in our study. Perera et al<sup>14</sup> found placental abruption was seen in mothers with threatened abortion and 4.1% developed intra uterine death. Weiss et al.<sup>17</sup> found an increased risk of pre-eclampsia, preterm delivery, placental abruption, and cesarean delivery for patients who reported light bleeding.

### Conclusion :

A significant number (32%) of pregnancy with threatened abortion ended as complete abortion. Outcome of pregnancy complicated by threatened abortion commonly associated with pre-maturity, low birth weight, intra uterine growth retardation and intra uterine death. Pregnancy with threatened abortion who continued had increased risk of low lying placenta, placenta praevia, and placental abruption. Since the data were collected only from one hospital it had chance of over representation which could not reflect general population and may not represent the similar situation in the whole population of the country. A broad base longitudinal cohort study could be more meaningful.

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