

A Clinical Study of Maternal and Fetal Outcome in Post-Dated Pregnancy in ICMH, Dhaka

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To find out the maternal and fetal outcome in post-dated pregnancy this prospective observational study was done in the Institute of Child and Mother Health (ICMH) Matuail, Dhaka. In this study the occurrence of postdated pregnancy is about 14%. Age group maximum (about 60%) is within 21 to 30 years of age. About 87% were housewives. Multiparity was more than primigravida. Majority of mothers observed normal kick count (more than 10/12 hours). More than 50% reported at labour. A large number (73%) needed operative delivery. Liquor was clear in about 63% cases and in about 36% cases liquor was stained with meconium. In this study group APGAR score of maximum (about 82%) was between 8 to 10 in 1 and 5 minutes. Only 18 babies needed admission in neonatal unit and one died after admission. One baby was stillborn during the study period. Perinatal death rate was about 2%. There is significant risk of stillbirth and neonatal mortality in postdated pregnancy. The study concluded that timely intervention can improve the maternal and fetal outcome in post-dated pregnancy.

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Keywords: Pregnancy, Postdated, Multiparity, Meconium, Fetal

Introduction

An important determinant of pregnancy outcome is the timely onset of labour and birth. Prolonged gestation complicates 3-14% of all pregnancies and poses an increased risk to both fetus and mothers.^{1,2} Postdated pregnancy has been defined as the pregnancy that exceeds 280 days or 40 weeks of gestation. The EDD is most reliably determined early in the pregnancy and may be based on the last menstrual period (LMP) in woman with normal regular menstrual cycle. If the estimated gestational age by a patient's LMP

is difficult to determine, then EDD is obtained by ultrasonography specially in the early weeks of pregnancy. Prolong pregnancy is associated with increased risk of perinatal morbidity and mortality.

General objective: To see the maternal and fetal outcome in postdated pregnancy.

Specific objective: To find out

- a) Outcome of labour in postdated pregnancy
- b) Relation between parity and post-dated pregnancy
- c) Fetal outcome in postdated pregnancy

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Method

Study design: This study was a prospective observational study.

Place of study: Department of Obstetrics and Gynaecology, Institute of Child and Mother Health (ICMH), Matuail, Dhaka

Study period: From November 1, 2013 to January 31, 2014

Study population: Total number of admitted obstetric patients were 1698, among them 241 cases were post dated pregnancy. 106 cases were selected from 241 who fulfilled the inclusion criteria.

Inclusion criteria:

- Patients who were sure about their last menstrual period having regular menstruation.
- Early ultrasonography confirming the EDD (expected date of delivery).
- Pregnancy beyond 40 weeks (280 days).

Exclusion criteria:

- Patient unable to give the accurate LMP (last menstrual period).
- Patient who have no early ultrasonography.
- Maternal diseases that interfere with maternal and fetal outcome like preeclamptic toxemia, eclampsia, diabetes mellitus, heart disease, renal disease, systemic hypertension and Rh negative mother.

Sample size: 106 cases of post-dated pregnancy.

Data collection: By preparing questionnaire in a structured form.

Data collection method: Data was collected by interviewing the cases as per questionnaire from the history, examination and investigation records.

Statistical analysis: The data was analyzed by manual and computer based statistical analysis.

Results

In this study age below 20 years was about 30%, between 21-30 years is about 60% and > 30 years is about 10% (Table I). Primigravida patients were about 44% and multigravida

were about 55% (Table II). Kick chart was normal in about 51% cases and about 41% cases had fetal movement < 10 in 12 hours, 8% cases had no fetal movement (Table III). NVD (Normal vaginal delivery) was conducted in about 27% and majority (about 73%) delivered by LUCS (Lower uterine caesarean section, Table IV). About 82% cases had satisfactory APGAR scoer (8-10) and 17% had APGAR score below 8 who need admission on neonatal unit, one baby was stillborn (Table V).

Table I: Age group of the study object

Age group (years)	Total - 106	%
20	32	30.19%
21-30	64	60.38%
>30	10	9.43%

Table II: Gravida of the study object

Gravida	Total - 106	%
Primigravida	47	44.34%
Multigravida	59	55.66%

Table III: Fetal movement count during admission

Fetal movement in last 12 hours	Total 106	%
> 10	54	50.94%
< 10	43	40.57%
Nil	09	8.49%

Table IV: Mode of delivery

Type of delivery	Number: 106	%
NVD	29	27.36%
LUCS	77	72.64%

Table V: APGAR score

APGAR score in one minute and five minutes	Total 106	%
8-10	87	82.08%
< 8	18	16.98%
0	1	0.94%

Discussion

Postdated pregnancy is an obstetric situation which demands special attention in developing countries like Bangladesh where neglect of pregnancy is common place. It is a high risk pregnancy because perinatal mortality and morbidity exceed that of term pregnancy. Study was conducted in three months time in ICMH, Matuail Dhaka where total number of admitted obstetric patients were 1,698. Among them 241 cases exceeded EDD. Among the 241 cases of post-dated pregnancy, 106 cases were included in this study who fulfilled the inclusion criteria. Therefore occurrence of postdated pregnancy is about 14%. Several studies showed the incidence of 3 to 14% cases of post-dated pregnancy.^{1,2}

In this study about 55% of the post-dated pregnancy were multigravida. About 44% were primigravida. The result is comparable with the other study in abroad³ and in the other hospital in Bangladesh.⁴ But one study in BSMMU found more cases in Primigravida,⁵ In the study group maximum (about 60%) are within age group of 21 to 30 years, 30% were below the age of 20 and only about 10% is more than 30 years of age. Other two studies showed 81% and 88% in the age group of 29 years respectively.^{6,7}

In this study about 87% subjects were housewives and about 13% were service holders. This study showed that during admission, fetal movement count were more than 10 per 12 hour in about 51% of the subject, and 41% have fetal movement less than 10 per 12 hours. Only 8% have no fetal movement in last 12 hours. This study has revealed that diminished fetal movement is a marker of placental insufficiency.^{6,8,9} This study showed that about 52% subject presented at labour and 48% were not in labour. Patients who were not in labour needed induction by prostaglandin, oxytocin,

sweeping of membranes along with surgical induction.^{3,10} Women with post-dated pregnancy have increased risk of operative and abdominal delivery as reported by different authors.^{6,11} In the present study about 73% post-dated pregnancy have operative and abdominal delivery.

In this study it is shown that colour of the liquor was clear in about 63% of the cases and about 37% cases have meconium stained liquor. This study has shown that the perinatal outcome in post-dated pregnancy is unfavorable leading to increased meconium stained liquor, increased chance of birth asphyxia, low one minute and five minute APGAR score, increased rate of admission in neonatal ward and there are meconium aspiration syndrome.¹²

In the present study it is shown that about 82% have APGAR score between 8 to 10 in one and five minutes. This study is comparable to similar observation in the study of Sultana⁶. About 17% had APGAR score below 8 after five minutes and needed admission in neonatal unit. Of the admitted patients only one baby died and others survived. One fetus was stillborn.

Conclusion

Post-dated pregnancy is a high risk pregnancy as it is related to higher maternal and neonatal mortality and morbidity. It is related to higher rate of intervention of labours. Most of the complications are preventable if diagnosed in time and appropriate measures are taken. Post-dated pregnancy is complicated in about 3% to 14%.^{1,2} Induction of labour appears to be an effective way of reducing perinatal morbidity with post-dated pregnancy. On the basis of analysis of results of the objects it can be concluded that post-dated pregnancy is one of the contributors of perinatal mortality and morbidity. Due to some technical difficulties rate of caesarian section were higher, may themselves carry iatrogenic risk to both

mother and fetus. A greater reduction in the rate of stillborn, intrauterine death and neonatal mortality and morbidity can be achieved if appropriate and sophisticated technical back up are made available.

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