



Original Article

Management and Outcome of Postdated Pregnancy at Rajshahi Medical College Hospital

Most. Merina Akhter,¹ Mst. Shaheen Nawrozy,² Abu Hena Mostafa Kamal,³ Sahela Jesmin⁴

Abstract

Background: Postdated pregnancy complicates about 10% of all gestation and is associated with an increase in perinatal mortality and morbidity. This study was designed to observe fetal as well as maternal outcome in the management of postdated pregnancies admitted into Rajshahi Medical College Hospital.

Methods: The study was carried out from July 2008 to June 2010. 100 cases of postdated pregnancies were included. Patients' age, occupation, parity, mode of delivery, the indication of LUCS, fetal & maternal outcomes were recorded in a predesigned questionnaire. Results were expressed as Mean \pm SD, actual number and percentage of total where applicable.

Results: Mean age (\pm SD) was 21.3 (\pm 5.32) years. 90% were housewives, 5% were in service and 5% were in other occupations. 53% were nullipara, 21% para-2, 18% were para-3, 8% were para-4. 57% of the study patients underwent caesarean section and 43% underwent vaginal delivery. Fetal distress (n=34), non-progression of labour (n=19), cord prolapse (n=1) & CPD (n=3) were the causes of LUCS. Regarding fetal outcome, healthy babies were 76%, meconium aspiration 13%, birth asphyxia 11%. Among birth asphyxia, neonatal death was 1% & still born was 2%. Maternal complications at delivery were tear in the genital tract 8%, PPH 5% & wound infection in 4% cases.

Conclusion: Here, still-birth rate was 2% (normally about 1 in 3000 deliveries) and perinatal mortality rate is 3% (normally about 2-3 in 1000 deliveries). So, patients should be encouraged to attend regular antenatal check up to prevent postdated pregnancy and its complications.

Key words: Postdated pregnancy, outcome

TAJ 2018; 31: No-2: 50-53

Introduction

Any pregnancy which has crossed the expected date of delivery i.e. 40 weeks of gestation (280 days) is called postdated or prolonged pregnancy.¹ The incidence of postdated pregnancy ranges from 4% to 18% depending on the method used to determine gestational age. It complicates approximately 10% of all gestation and is

associated with an increased adverse outcome in both the fetus and the mother.²

Postdated pregnancy is associated with an increase in perinatal mortality and morbidity in pregnancies which appear to be otherwise low risk.³ Placental insufficiency that develops beyond 41 weeks gestation leading to reduced oxygen and nutrients supply to the fetus leading to fetal hypoxia,

¹ Assistant Professor, Department of Obstetrics & Gynaecology, Rajshahi Medical College, Rajshahi

² Junior consultant, (Obstetrics & Gynaecology), Sadar Hospital, Nilphamari

³ Assistant Professor & Head, Department of Biochemistry, Kushtia Medical College, Kushtia

⁴ Professor & Head, Department of Obstetrics & Gynaecology, Rajshahi Medical College, Rajshahi

meconium aspiration syndrome, neonatal hypoglycemia, still birth or neonatal death. Still birth rate (normally 1 in 3000 deliveries) & perinatal mortality rate (normally 2-3 in 1000 deliveries) are doubled at 42 weeks and nearly six fold at 43 weeks gestation.^{2,3,4} In addition to mortality there is an increased risk of meconium aspiration syndrome, neonatal seizures and long term handicap. In 1995, at the John Radcliffe Hospital, 1.1% of neonates who were delivered after their estimated date of delivery (EDD) experienced a serious adverse outcome (perinatal death, birth asphyxia or meconium aspiration).³

The complications of postdated pregnancy should ideally be discovered before labour because postdated infant are larger than term infants and are therefore predisposed to complication associated with macrosomia including cephalopelvic disproportion, shoulder dystocia, prolong labour, increased maternal trauma and postpartum haemorrhage, increased rate of caesarean delivery.⁵ 5–10% of postdated fetuses are postmature and they tend to be smaller. Postmature fetuses are fragile, tolerate labour poorly, and frequently are acidotic at birth.⁶

Taking the whole matter into consideration, this study was designed to observe fetal as well as maternal outcome in the management of postdated pregnancies attending at Rajshahi Medical College Hospital.

Materials and Methods

The cross sectional hospital based study was carried out from July 2008 to June 2010 at the Department of Obstetrics and Gynaecology, in

Rajshahi Medical College Hospital, Rajshahi. A total of 100 pregnant women with postdated pregnancies were included in this study by purposive sampling technique.

Inclusion criteria:

1. Women with single postdated pregnancy from 40 weeks +1 day up to 42 completed weeks.
2. Pregnant women who are sure about their last menstrual period (LMP) having regular menstrual cycle prior to existing pregnancy.
3. Women in whom pregnancy is dated by early ultrasonography.

Exclusion criteria:

1. Pregnant women who are unable to give accurate history of their last menstrual period or pregnancy are not dated by early ultrasonography.
2. Pregnant women with some irregularities of menstruation prior to existing pregnancy.
3. Multiple pregnancies
4. Fetal malpresentation & fetal abnormality.
5. Presence of coexisting medical disorder (e.g. diabetes mellitus, pre-eclampsia, eclampsia, renal disease, heart disease, Rh-ve mother.)

Patients' age, occupation, parity, gestational age, mode of delivery, when LUCS was the mode of delivery then the indication of LUCS, babies APGAR scores, babies' weight, fetal & maternal outcome were recorded with the help of a predesigned questionnaire.

Table I: APGAR scoring system.

Parameters	Score=0	Score=1	Score=2
A: Appearance (colour)	Blue, pale	Body pink, extremities blue	Complete pink
P: Pulse (Heart rate)	Absent	Slow (below 100)	Over 100
G: Grimace (reflex irritability)	No response	Grimace	Cry
A: Activity (muscle tone)	Flaccid	Flexion of extremities	Active body movements
R: Respiratory rate	Absent	Slow, irregular	Good, crying
Total score=10, No Depression=7-10, Mild Depression=4-6, Severe Depression=0-3.			

Results were expressed as Mean± Standard Deviation, actual number and percentage of total as applicable.

Results:

The mean (\pm SD) age of all the mothers (n=100) was 21.3 (\pm 5.32). 90% were housewives, 5% were in service and 5% were in other occupations. 53% were nullipara, 21% para-2, 18% were para-3, 8% were para-4. 57% of the study patients underwent caesarean section and 43% underwent vaginal delivery.

Table II: Indications for caesarean section (LUCS) of study patients who underwent LUCS.

Indication of LUCS	No.	Percentage (%)
Fetal distress	34	59.7
Non-progressive labour	19	33.3
Cord prolapsed	1	1.7
CPD	3	5.3
Total	57	100

Table III: Babies APGAR score (at 1 min and at 5 min) after birth

APGAR Score:	Score <7	Score \geq 7	Total babies
Score at 1 minute	33	67	100
Score at 5 minute	11	89	100

Table IV: Weight of newborns

Weight range (kg):	< 2.5 kg	2.5- 3.9 kg	\geq 4 kg	Total babies
No. of Cases / %	21	72	7	100

Table V: Fetal outcome among the study patients

Fetal outcome	No.	Percentage (%)
Healthy baby	76	76
Meconium aspiration	13	13
Birth asphyxia	11	11
Neonatal death	1	1
Still born	2	2
Total	100	100

Maternal complication at delivery: Tear in the genital tract 8% & PPH 5% cases. 4% had wound infection.

Discussion

Postdated pregnancy is a high risk pregnancy, as there is a possibility of fetal distress and death due to progressive fetal hypoxia following placental insufficiency as a result of its aging.

Abotalib et al.⁷ found in their study that the mean age was 27.46 \pm 5.5 years. Morris et al.³ observed the mean age was 31.9 \pm 1.1 years. In the present study, the mean (\pm SD) age of the mothers was 21.3 \pm 5.32 years. Lower age of the present study may be due to the early marriage and pregnancy scenario present in our country. Study by Dutta showed that prolonged pregnancy occurs more commonly in women with sedentary habit¹. In this

study, housewives (90%) are the highest sufferers of prolonged pregnancy in comparison to the others.

APGAR score <7 at 1 minute was 33% and at 5 minutes was 11%. Abotalib et al.⁷ found the mean APGAR score was 7.66 \pm 1.09 and 8.98 \pm 0.46 at 1 minute and 5 minutes after birth. In another study Zhang et al.⁸ observed APGAR score at 1 min <7 in 19.2% and at 5 minutes after birth 7.7%.

In this study, it was found that 76% was healthy baby, about 13% meconium aspiration, 11% birth asphyxia, 1% neonatal death and still born was 2%. Regarding the maternal complication, tear in the genital tract was in 8% & PPH in 5% cases. 4%

had wound infection. The findings of fetal outcome and maternal complication in the present study were strengthened by similar observations.^{3,9,10,11} All investigators have observed significant maternal complication in their study.

Conclusion

This sample size (N=100) was too small to draw any definite conclusion. Still birth rate and perinatal mortality rate was noted to be higher than usual in our study. So, patients should be encouraged to attend regular antenatal check up to prevent postdated pregnancy and its complications.

References

1. Dutta D.C: Text Book Obstetrics including Perinatology and Contraception. Calcutta, India. 6th Edition 2005: 28–40, 109–110, 318–322.
2. Jetti A, Poovali S, Stanley KP. Prolonged pregnancy: Obstetrics Gynaecology and Reproductive Medicine 2007; 18 (1): 7–11.
3. Morris JM, Thompson K, Smithey J, Gaffney G, Cooke I, Chamberlain P, Hope P, Altman D, Mackenzie IZ. The usefulness of ultrasound assessment of amniotic fluid in predicting adverse outcome in prolonged pregnancy: a prospective blinded observational study. Int J of Obstet and Gynaecol 2003; 110: 989–994.
4. Crowley P, O`Herlihy C, Boylan P. The value of ultrasound measurement of amniotic fluid volume in the management of prolonged pregnancies. Br J Obstet Gynaecol 1980; 91: 444-8.
5. Grausz JP, Heinler R. Asphyxia and gestational age. ObstetGynecol 1983; 62: 175–8.
6. Arias F. Practical guide to high risk pregnancy and delivery; 3rd edition; 2008: 277-291.
7. Abotalib ZM, Soltan MH, Chowdhury N, Adelusi B. Obstetric outcome in uncomplicated postdated pregnancy. Int J Gynaecol & Obstet 1996; 55: 225-230.
8. Zhang J, Troendle J, Meikle S, Klebanoff MA, Rayburn WF. Isolated oligohydramnios is not associated with adverse perinatal outcomes. Int J of Obstet and Gynaecol 2004; 111: 220-225.
9. Divion MY, Marks AD, Henderson CE. Longitudinal measurement of the amniotic fluid index in postterm pregnancies and its association with fetal outcome. Amer J ObstetGynecol 1995; 172: 142-146.
10. Campbell MK, Ostbye T, Irgens L. Postdated birth: risk factors and outcomes in a 10 year cohort of Norwegian birth. Obstetrics and Gynecology 1997; 89: 543-548.
11. Caughey AB, Stotland NE, Washington E, et al. Maternal and obstetric complications of pregnancy are associated with increasing gestational age at term. Am J Obstet Gynecol 2007; 196: 155.

All correspondence to-
Most. Merina Akhter
 Assistant Professor,
 Department of Obstetrics & Gynaecology
 Rajshahi Medical College
 Email: dr.merina.akhter@gmail.com