ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

KEY WORDS: Fetal distress, meconium aspiration syndrome, postdated pregnancies, primigravida.

A STUDY ON FETO-MATERNAL OUTCOME IN A POSTDATED PREGNANCY

Dr. B. Sri Vidya Junior Resident, Department of Obstetrics and Gynaecology, Narayana Medical College, Nellore, Andhra Pradesh.

Dr. B. Harika Associate Professor, Department of Obstetrics and Gynaecology, Narayana Medical College, Nellore, Andhra Pradesh.

ABSTRACT

BACKGROUND: The objective of the study is to find out the fetal and maternal complications in post dated pregnancy. This is a prospective observational study.
METHODS: Patients who have completed 40weeks of gestational age, meeting the inclusion criteria.
RESULTS: Of 100 cases 74(74%) cases were under 20 to 25 years, majority cases were primigravida (66%), overall caesarean rate was 36%, Meconium-stained liquor with fetal distress was the most common indication for LSCS 9(25 %). Fetal distress was the most common fetal complications, number of induced labor is 71.4% at 41 weeks 1 day to 42 weeks
CONCLUSION: In our study we concluded that prolonged pregnancy was associated with significant risk of perinatal complications like fetal distress, meconium aspiration syndrome and IUGR. There was significantly increased risk of obstetric complications like oligohydramnios, perineal tear, atonic PPH and shoulder dystocia.

INTRODUCTION:

Postdate, Post term, Post maturity and prolonged pregnancy is accepted terms by WHO. It is defined as a pregnancy that persists beyond 42 weeks period of gestation or 294 days. Incidence varies depending on whether the calculation is based on the history and clinical examination alone, or whether first trimester ultrasound is used to estimate the gestational age. The assessment of gestational age by first trimester ultrasound reduced the incidence of post term pregnancy significantly.

"Post mature" should be used to describe infant with recognizable clinical features indicating a pathologically prolonged pregnancy. Therefore, postdated or prolonged pregnancy is the preferred expression for an extended pregnancy.

The combination of continued fetal growth and arrested placental growth may lead to decrease in placental nutrient reserve, compromised fetal circulation and eventually fetal distress. It has been reported that there is increased risk of oligohydramnios, meconium-stained amniotic fluid, macrosomia, fetal post maturity syndrome, cesarean section and increased risk of perinatal morbidity and mortality.

Maternal risks include labor dystocia, severe perineal injury, operative vaginal delivery. Hence, need for induction is more in postdated pregnancy.

The aim of the present prospective study is to study the feto-maternal outcome in pregnancies which have crossed the expected date of delivery.

OBJECTIVES OF THE STUDY:

a) To study the maternal complications in postdated pregnancy.
b) To study the perinatal morbidity and mortality in postdated pregnancy.

METHODS:

The study was conducted in the Department of Obstetrics and Gynecology in Narayana Medical College Hospital, Nellore for 2 years. 100 cases were selected from antenatal clinic and labor room.

Inclusion Criteria:

- Pregnant women more than 40 weeks of gestation (with excellent dates).
- Singleton pregnancy with cephalic presentation.

Exclusion Criteria:

- Any associated complications such as previous LSCS, malpresentations, Placenta previa, Abruption, PIH, GDM and other medical complications.
- Fetal anomalies.

Complete clinical assessment of postdated patients was done. Fetal monitoring was done with the help of non-stress test, ultrasonography, and daily fetal movement count. With the help of above monitoring timely interventions were made. Labor was monitored closely.

- History was taken
- General and systemic examination done.
- Per abdominal and per vaginal examination done.
- Labor progressed spontaneously or by induction.
- Mode of delivery, any operative interference.
- Perinatal morbidity by low APGAR score, Meconium aspiration syndrome, NICU admission and mortality, if any.
- Maternal morbidity as PPH, 3rd and 4th degree perineal tear.

OBSERVATION AND RESULTS:

In our study, out of 100 cases, 74 (74%) cases were under 20–25 years, 23 (23%) cases were under 26–30 years, and 3 (3%) cases were under 31–35 years. While the mean age was 22.76 + 2.75 (20–35 years). While the mean age in Mahapatro's[3] study was 24.19 ± 3.30, while the mean age in Eden et al.'s[4] study was 25.8 years.

In our study, majority cases were primigravida (66%) which is similar to Mahapatro[3] and Alexander et al.'s study.[5] [Table 1]

Table 1: Age Wise Distribution Of Cases

Age (in years)	Number of cases (%)
20-25yrs	74 (74%)
26-30 years	23 (23%)
>30 years	3 (3%)
TOTAL	100

Table 2: Distribution Of Cases According To Parity

Parity	Number of cases (%)
Primigravida	66 (66%)
Multigravida	34 (34%)
total	100

Table 2 shows that maximum cases were primigravida (66%)

In our study, out of 100 cases, 62 cases were full-term vaginal

delivery, whereas 36 cases were of LSCS, and 2 cases were of instrumental delivery. It was observed that out of 62 vaginal delivery 55 patients delivered between 40.1 weeks and 41 weeks of gestational age, out of 55 cases 35 (63.6%) progressed and delivered spontaneously, and 20 cases (36.3%) delivered after induction of labor. Out of 62 vaginal deliveries 7 cases were between 41 weeks 1 day and 42 weeks out of which 2 cases (28.57%) progressed and delivered spontaneously and 5 (71.43%) case were delivered after induction of labor, P value was significant The rate of instrumental delivery in our study was 2%, whereas in Mahapatro's[3] study, it was found to be 5.72%. In Singhal et al.'s[6] study and Davinder et al.'s[7] study, the rate of instrumental delivery was 8.6% and 10.35%, respectively.

Table 3: Distribution of cases based on Mode of delivery

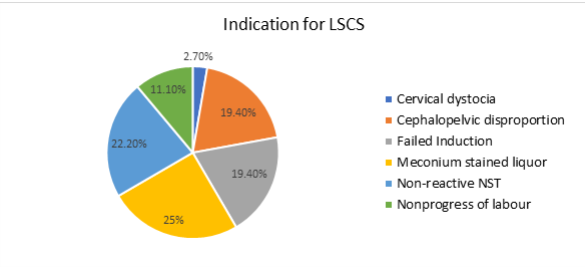
Period of Gestation	FTNVD		LSCS	Instrumental Delivery	Total
	Spontaneous	Induced			
40 weeks 1day to 41weeks	35	20	31	2	88
41 weeks 1 day to 42 weeks	2	5	5	-	12
Total	37	25	36	2	

Total number of cesarean sections were 36. Maximum number of cases i.e., 25% indications were meconium-stained liquor with fetal distress, in 22.2% cases were non-reactive NST, in 19.4% were CPD and failed induction, in 11.1% cases were nonprogress of labor, in 2.7% cases were cervical dystocia. [Table 4]

In our study, it is observed that Meconium stained liquor with fetal distress is the most common indication for LSCS 8 (23.5%) like Mahapatro's[3] study, in which fetal distress was found to be the most common indication for LSCS (65.5%)

Indications for Lower Segment Cesarean Section(n=36)

a) Cervical dystocia = 1 (2.7%)
b) Cephalopelvic disproportion= 7 (19.4%)
c) Failed induction = 7 (19.4%)
d) Meconium-stained liquor = 9 (25%)
e) Non-reactive NST = 8 (22.2%)
f) Nonprogress of labor = 4 (11.1%)



Oligohydramnios found in 18% of cases, perineal tear in 4% of cases, atonic PPH in 3% cases and shoulder dystocia in 1% of cases. [Table 5]

Table 4: Distribution of patients according to maternal complications (n=26)

Maternal Complications	Number of cases (%)
Oligohydramnios	18 (18%)
Perineal tear	4 (4%)
Atonic PPH	3 (3%)
Shoulder dystocia	1 (1%)

Table 5: Distribution According To Fetal Complications (n=16)

Fetal Complications	Number of cases (%)
Fetal Distress	8 (8%)
Meconium Aspiration Syndrome	6 (6%)
IUGR	1 (1%)
Jaundice neonatorum	-
Macrosomia	1 (1%)

In our study, fetal distress was the most common fetal complications., i.e.,8%, meconium aspiration syndrome found in 6% cases, IUGR in only 1% cases and macrosomia in only 1% cases. Prolonged delivery was associated with increased risks of perinatal complications such as fetal distress and meconium aspiration syndrome. The rate of cesarean section was higher in prolonged pregnancies.

Routine dating of pregnancy using early USG reduces the rate of prolonged pregnancy. Induction of labor at 41 weeks gestation appears to be an effective strategy to reduce the risk of fetal and maternal morbidity and mortality. It appears that smaller term fetuses run a greater risk than their larger counterparts although current method of antepartum assessment of fetus are still inadequate. So currently the only policy of benefit is routine induction of labor after 40 weeks, confirming fetal maturity.

CONCLUSION:

Post mature pregnancy is a complex perinatal problem and ranks as a major source of perinatal morbidity and mortality, among term pregnancies. To improve the outcome attempts should be made to determine the estimated date of confinement in all pregnancies before the third trimester by emphasizing the early and regular antenatal checkup. Antepartum surveillance should be performed in all pregnancies that might have reached 42 weeks of amenorrhea.

The most appropriate direction appears to be a policy of induction of labor after 41 weeks, after assessing the fetal maturity and with evidence of ripened cervix or when fetal compromise is documented so that the incidence of maternal and perinatal mortality and perinatal morbidity can be brought down to acceptable and comparable figures.

Emergence of improved antepartum testing and effective cervical ripening agents (Prostaglandins and relaxin) may improve the outcome and management of postdated pregnancies.

During the intrapartum period special attention should be paid to careful fetal monitoring. Anticipation for the complication and proper management of the baby in the neonatal unit goes a long way to improve the outcome in postdated pregnancy.

REFERENCES:

1. David C. Lagrew and Roger K. Freeman M.D. Management of Post date pregnancy. Am. J. Obst. & Gynac 1986 : 154 : 8-13.
2. Herabutya Y. Prasertswat, P. Prolonged pregnancy the management dilemma. Int. J. Gynae. & Obstet. 1992, April : 37 : 253-8.
3. Mahapatro A. Fetomaternal outcome in pregnancy beyond 40 weeks. Int J Pharm Bio Sci 2015;6:53-8.
4. Eden RD, Gergely RZ, Schifrin BS, Wade ME. Comparison of antepartum testing schemes for the management of the postdate pregnancy. Am J Obstet Gynecol 1982;144:683-92.
5. Alexander JM, McIntire DD, Leveno KJ. Forty weeks and beyond: Pregnancy outcomes by week of gestation. Obstet Gynecol 2000;96:291-4.
6. Singhal P. Fetomaternal outcome following postdate pregnancy. A prospective study. J Obstet Gynecol India 2001;51:89-93.
7. Votta RA et al. Active management of prolonged pregnancy. Am. J. of Obst. & Gyane. 1993 Feb. 168 :Williams'Obstetrics – 18th edition.
8. I an Donald. Practical obstertrical problems. Jim enez solis, Barraza Espinoza. Biophysical profile in prolonged pregnancy. Another alternative to foetal suveillance. John Studd. Progress in Obstetrics & Gynaecology. Vol.7 and Vol.5.
9. Robert Husher MD, Mark Boyd MD. Assessment of fetal risk in prolonged pregnancies. Am. J. of Obst. & Gynae. 1988 : 158 : 259 – 264.
10. Mark E. Boyd. M.D., Robert H. Usher M.D. Obsteric consequence of postmaturity. Am. J. of Obst. & Gynae. 1988, 150 : 334 – 8. 150 : 334 – 8.