“FETOMATERNAL OUTCOME IN POSTDATED PREGNANCY”

Gynaecology

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ABSTRACT

Post term pregnancy has a high risk for fetus. It often results in labour abnormalities like labor dystocia, fetal macrosomia and increased in chances of caesarean delivery. Management of pregnancy beyond 40 weeks gestation relies on an accurate assessment of the gestational age. In our study 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.

KEYWORDS

Fetomaternal Outcome, Post Dated Pregnancy

INTRODUCTION

Last menstrual period and early ultrasound is the best landmark to assess the gestational period in pregnancy. A post-term or prolonged pregnancy is the one which extends to or beyond 42 weeks or 294 days from the first day of the last menstrual period with incidence of 5 to 10%. Postdated pregnancy always possess a high risk, as there is a possibility of fetal distress and fetal death due to progressive fetal hypoxia following placental insufficiency. Maternal risks due to postterm pregnancy includes labour dystocia, increase in severe perineal injury due to macrosomia, doubling in the rate of caesarean delivery and cause anxiety. Postdated pregnancy remains an unresolved clinical problem with the threat of medicolegal consequences in cases of unfavourable outcome. Management of pregnancy beyond 40 weeks gestation relies on an accurate assessment of the gestational age. So, the need for the present study are to find out the maternal and fetal risk associated with pregnancy beyond expected date of delivery.

AIM & OBJECTIVES

1. To study the situational analysis of postdated pregnancy.
2. To study the maternal outcome in pregnancies beyond expected date of delivery (EDD).
3. To know the fetal morbidity and mortality.

MATERIALS AND METHODS

The postdated pregnancies admitted to Jawahar Lal Nehru medical college and Hospital from Feb 2019 to July 2020 for a period of one and half year. A minimum of 200 cases selected by simple random sampling.

The data collected using a piloted Performa meeting the objectives of the study by means of personal interview with the patients after taking informed consent.

Inclusion Criteria

- (i) Lady with regular menstrual cycles and known LMP.
- (ii) Singleton pregnancy with vertex presentation.
- (iii) Gestational age beyond 40 weeks of pregnancy upto 44 weeks.

Exclusion Criteria

- (i) Gestational age > 44 weeks
- (ii) Previous cesarean section cases
- (iii) High risk pregnancies like diabetes, antepartum haemorrhage (APH), premature rupture of membranes (PROM) and pregnancy induced hypertension (PIH)
- (iv) Congenital anomalies.

OBSERVATION

Out of the total 200 randomly selected patients, majority 165 (82.5%) were booked cases whereas 35 (17.5%) were unbooked cases. The mean age of study participants was 23.34 years with maximum patients in the range of 21 to 25 years of age.

Majority 104(52%) of the study participants were included in the group of gestational age of 40 week to 40+6 week.

Gestational age (w-weeks, d-days)	No. of patients	Percentage %
40-40W6D	104	52
41-41W6D	73	36.5
≥ 42 W	23	11.5
Total	200	100

128 cases(64%) were primi. Majority i.e. 148 patients (74%) went into spontaneous labour and rest 52 patients(36%) labour was induced.

Patients According To Their Clinical Parameters (Mother).		
Clinical parameters	Number of participants	Percent (%)
Mode of delivery		
Spontaneous vaginal	98	49
Instrumental	39	19.5
Caesarean section	63	31.5
Type of induction (n=52)		
Tab misoprost 25 mcg	5	9.6
Dinoprostone PGE2 gel	31	59.6
Oxytocin infusion	16	30.8
Indication of caesarean section(n=63)		
Fetal distress	23	36.5
Failure of induction	20	31.75
CPD	15	23.8
Oligohydramnios	5	7.95
Bishop scoring		
<4	82	41
4-6	66	33
>6	52	26

Majority i.e. 98 patients (49%) went into spontaneous labour and delivered vaginally. Among 52 participants who were given induction, maximum 31 (59.6%) were induced by Dinoprostone gel. Among all participants who had undergone caesarean section, indication for caesarean section was fetal distress in 23 patients(36.5%). Poor Bishop's score is associated with failure of induction and lesser chances of vaginal delivery. In patients with Bishop's score <4, maximum underwent caesarean section in view of failure of induction and fetal distress. Bishop score was <4 in 82 (41%).

	No. of patients	Percentage %
BIRTH WEIGHT		
<2.5 Kg	14	7%
2.5-3.5 kg	162	81%
>3.5 kg	24	12%
NICU ADMISSION		
YES	28	14%
NO	172	86%
INDICATIONS OF NICU ADMISSION(n=28)		
Fetal distress with meconium	18	64.28%
Macrosomia	1	3.57%
IUGR	4	14.28%
Jaundice	5	17.87%

Distribution of patients according to maternal complications

Maternal complications	Number of cases	Percentage
Wound gap	1	0.5%
Perineal tear	16	8%
Atonic PPH	14	7%
Shoulder dystocia	6	3%

The majority 162 (81%) of the babies born to participants weighed between 2.5 to 3.5 kg. The majority 172 (86%) babies born to participants did not need admission to NICU, while 28 (14%) babies were admitted to neonatal intensive care ward. Out of 28 cases, the primary reason was fetal distress with meconium stained liquor (18 cases). There were 3 still birth and 2 neonatal death.

In the present study, 14 (7%) patients had post partum haemorrhage. 16 patients (8%) had perineal tear, 1 patient (0.5%) had wound gap and 6 patients (3%) had shoulder dystocia. There was no maternal mortality in our study.

DISCUSSION

In our study, out of 200 cases, the mean age of study participants was 23.34 years with maximum patients in the range of 21 to 25 years of age. The mean age in Mahapatro's study was 24.19 ± 3.30 , while the mean age in Eden *et al*² study was 25.8 years.

In our study, majority cases 128 cases (64%) were primi which is similar to Mahapatro¹ and Alexander *et al*'s³. In studies done by Francis S *et al*⁴, Patel N *et al*⁵ maximum patients were between 40 to 40.6 weeks which is similar to our study.

In the present study, maximum induction was done by Dinoprostone gel in 31 patients (59.6%). Foley's induction was not tried in our cases. In study conducted by Nikita Patel *et al*, showed maximum induction by Tab Misoprostol 25 mcg in 12 patients (57.14%) followed by Dinoprostone PGE2 gel in 9 patients (42.85%).

In our study, out of 100 cases, 98 cases (49%) were vaginal delivery, whereas 63 cases (31.5%) were of LSCS and 39 cases (19.5%) were of instrumental delivery. In our study, overall caesarean rate was 31.5%. Singhal *et al*⁶ reported 16.7% rate of LSCS. The rate of instrumental delivery in our study was 19.5%. In Singhal *et al*⁷ study and Davinder *et al*⁷ study, the rate of instrumental delivery was 8.6% and 10.35%, respectively.

In the present study, indication for caesarean section was fetal distress in 23 patients (36.5%) and failure of induction in 20 cases (31.75%), which were followed by CPD and oligohydraminos. Incidence of caesarean section for fetal distress by Caughey AB *et al*⁸ is 23.5% and CPD (21.4%).²¹ In the study by Akhtar P *et al*⁹, caesarean section was done in fetal distress in 32% cases, non progress of labour in 25.3% cases and failure of induction in 24% cases.

In our study, fetal distress was the most common fetal complications 18 (64.28%) and 4 (14.28%) cases of IUGR, which is similar to Vndana Nmbargi *et al*'s study. Prolonged delivery was associated with increased risks of perinatal complications such as fetal distress and meconium in prolonged pregnancies.

In the present study, 14 (7%) patients had PPH, 16 patients (8%) had perineal tear, 1 patient (0.5%) had wound gap and 6 patient (3%) had shoulder dystocia. There was no maternal mortality. This present study correlates with study conducted by Aaron B. Caughey⁸, found that the risk of maternal peripartum complications increase beyond 40 weeks of gestation. In study conducted by Patel N *et al*⁵, maximum morbidity was because of perineal tears/cervical tears in 10 patients (34.44%) and prolonged labour/shoulder dystocia in 10 patients (34.44%) followed by PPH in 6 patients (20.47%).

CONCLUSION

The timely onset of labor and birth is an important determinant of perinatal outcome. Post dated pregnancy is a high risk factor in terms of fetal outcome as there is more fetal morbidity. Induction of labor can be safely practised at 41 weeks of gestation. Most commonly fetal distress causes caesarean section in both, spontaneous as well as induced labour in post dated pregnancy. Though the correct choice of management remains controversial but as per our study it seems reasonable to induce labour at 41 weeks of gestation as perinatal morbidity is significantly more in > 40 weeks of gestation.

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