



Original Article

STUDY ON FETAL AND MATERNAL OUTCOME OF POSTDATED PREGNANCY

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Abstract:

Postdated pregnancy is not so uncommon in obstetric practice. When a pregnancy crosses the expected date of delivery (beyond 280 days) it is called postdated pregnancy. The incidence is about 7% of all pregnancies. This prospective observational study was carried out in 165 postdated pregnancies admitted in the Department of Obstetrics & Gynaecology, during a period of 3 years from January 2021 to December 2023. Majority of the patients were below 25 years of age (47.88%) and primigravida (41.82%). Most of the patients belonged to rural areas (55.75%) and were middle socio-economic status group (45.45%). The majority of these postdated women were delivered by NVD (52.12%), followed by LSCS (32.72%) and instrumental (15.15%). Postdated pregnancy was associated with perinatal complications like meconium aspiration syndrome, oligohydramnios, fetal birth injuries, septicemia, shoulder dystocia, non-reassuring fetal heart rate status, fetal distress in labour. There was an increased risk of maternal complications like increased caesarean section rate, post-partum hemorrhage (PPH), cervical tear, perineal tear. Management of postdated pregnancy is challenging. Careful advice and timely interventions can reduce fetomaternal complications.

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Introduction:

Post dated pregnancy is gestation longer than 40 weeks¹. Exact etiology is not known but some risk factors are associated with post dated pregnancy like parity, maternal age, past history of post dated pregnancy, genetics and obesity^{2,3}. Management protocol for post dated pregnancy is fetal surveillance for prolonged pregnancy, induction of labour, during intrapartum care proper monitoring of labour and timely LSCS whenever needed⁴.

It has been reported that there is an increased risk of oligohydramnios, meconium stained amniotic fluid, fetal postmaturity syndrome and caesarean delivery in post dated pregnancy. Prolonged pregnancy has always been regarded as a high-risk condition because perinatal morbidity and mortality is known to rise⁵.

The aim of the present study was to find out the fetal and maternal outcome of postdated pregnancies.

Methods:

This was a prospective observational study carried out in the department of obstetrics and gynaecology of Ad-din Women's Medical College Hospital, Maghbazar from January 2021 to December 2023 for a period of 3 years. Written informed consent was taken from the patient. A total 165 patients were included with non-random sampling method.

Inclusion criteria

- Pregnant ladies with more than 40 weeks of gestation
- Cephalic presentation

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- *Who have given written informed consent to participate in this study*

Exclusion criteria

- Previous lower segment cesarean section (LSCS)
- Malpresentations
- Placenta previa
- Placental abruption
- *Pregnancy induced hypertension*
- Gestational diabetes
- Anaemia and other medical complications
- Fetal anomalies

Postdated pregnant patients fulfilling the inclusion and exclusion criteria were included in the study. Detailed history was obtained from the patient about the socioeconomic status, the patient's age, gestational age, menstrual history, obstetric history. General physical examination, systemic examination and obstetric examination were carried out. Per speculum and per vaginal examination were done. Complete blood count, liver function tests, renal function tests, blood sugar, blood grouping, urine analysis, HIV, VDRL, HBsAg, HCV were done. USG Doppler and non-stress test (NST) were done. Decision of mode of delivery was taken as required. Some patients were already in spontaneous labour, some were subjected to induction of labour. If delivery was by caesarean section, the indication was recorded. Perinatal morbidity by low Apgar score, meconium aspiration syndrome, neonatal intensive care unit (NICU) admission and mortality if any was recorded. Maternal complications such as postpartum haemorrhage, perineal tear, etc were also recorded.

Result:

Out of 2319 patients delivered, there were 165 postdated deliveries so the frequency of postdated pregnancy was 7.11%.

Majority of the patients were below 25 years of age (47.88%) and primigravida (41.82%). More than half of the respondents belonged to rural areas (55.75%). Most of the patients were Middle Socio-Economic Status group (45.45%). Majority of these postdated women were delivered by NVD (52.12%), followed by LSCS (32.72%) and Instrumental (15.15%).

Irregular antenatal checkup was observed in most of the cases (61.21%) of postdated pregnancies.

Meconium-stained liquor and failure of induction were the commonest indication for LSCS. Respiratory Distress Syndrome (RDS) was the most common neonatal complication (6.66%), followed by Meconium Aspiration Syndrome (4.84%). Majority of the baby had Apgar Scores of more than 7 at 5 minute (91.52%) and NICU admission was seen in 11.51% only. Neonatal death was 3.03%.

Table-I

Distribution of cases by Age

Age(years)	No of cases (N=165)	Percentage
20-25	79	47.88
26-30	43	26.06
31-35	35	21.21
36-40	8	4.85
Total	165	100.00

Table-II

Distribution of cases by Parity

Parity	Frequency	Percentage
Primigravida	69	41.82
Para 2	57	34.55
Para 3	34	20.60
> Para 3	5	3.03
Total	165	100.00

Table-III

Distribution of cases by Socioeconomic Status

Socioeconomic Status	Frequency	Percentage
Lower Class	68	41.21
Middle Class	75	45.45
Upper Class	22	13.33
Total	165	100.00

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Distribution of cases by Residence

Residence	Frequency	Percentage
Rural	92	55.75
Urban	73	44.24
Total	165	100.00

Table-V
Distribution by Mode of Delivery (MOD)

Mode of delivery	Frequency	Percentage
NVD	86	52.12
LSCS	54	32.72
Instrumental	25	15.15
Total	165	100.0

Table-VI
Frequency of Antenatal Check Up

ANC	Frequency	Percentage
Regular ANC	53	32.12
Irregular ANC	101	61.21
No ANC	11	6.67
Total	165	100.00

Table-VII
Indication for caesarean section

Indication	No. of cases	Percentage
Absent liquor	4	2.42
Cephalopelvic disproportion	8	4.84
Failure of induction	11	6.66
Meconium stain liquor with fetal distress	12	7.27
Severe oligohydramnios	10	6.06
Non progress of labour	9	5.45
Total	54	32.72

Table-VIII
Maternal complications

Maternal complication	No. of cases	Percentage
Postpartum haemorrhage	9	5.45
Perineal tear	8	4.84
Cervical tear	5	3.03
Total	22	13.32

Table-IX
Fetal complications

Fetal complication	No. of cases	Percentage
Meconium aspiration syndrome	8	4.84
Respiratory distress syndrome	11	6.66
Shoulder dystocia	3	1.81
Hyperbilirubinemia	6	3.64
Death	5	3.03
Total	33	19.98

Table-X
Distribution by NICU admission

NICU admission	Frequency	Percentage
Yes	19	11.51
No	146	88.48
Total	165	100.0

Table-XI
Distribution by Apgar Scores

Apgar Score at 5 mins	Frequency	Percentage
<4	5	3.03
4-7	9	5.45
>7	151	91.52
Total	165	100.0

Discussion:

The present study was conducted to find out the incidence of maternal complications, perinatal mortality and morbidity in postdated pregnancies. Total cases were 165 which were enrolled based on inclusion and exclusion criteria.

In this study maximum cases (47.88%) were in between 20-25 years, while 26.06% were in between 26-30 year of age. Akhtar P et al⁶, observed in their study on pregnancy beyond 41 weeks of gestation that 82% of cases were in the age group of 18 to 29 years. In study by Dobariya PV⁷ et al, there were 58 (69.05%) patients in age group 20 to 30 years. In study by Patel N et al⁸, there were 32 (64%) cases in age group 20 to 30 years.

Maximum women (41.82%) were primigravida in this study. Similarly Mahapatro et al⁹, found maximum (72%) of patients were primigravida. Alfrevic et al¹⁰, found in their study that primiparity was significantly associated with postdated pregnancy.

In this study maximum women(55.75%) were belonged to rural area and 44.24% were belonged to urban area. Irregular antenatal checkup was observed in most of the cases (61.21%) of postdated pregnancies.

In this study maximum cases (52.12%) were delivered normally, caesarean section were performed in 32.72% while in 15.15% instrumental delivery were performed. Shinge N et al¹¹, studied that maximum patients (53.7%) underwent spontaneous vaginal delivery, 37% patients required caesarean section as mode of delivery and 9.5% patients required instrumental delivery. The rate of instrumental delivery in this study was 15.15%, whereas in Mahapatro's study it was found to be 5.72%⁹.

In the present study, indication for caesarean section was meconium stained liquor with fetal distress in 12 patients (7.27%) , which were followed by failure of induction in 11 cases (6.66%), severe oligohydramnios in 10 patients (6.06%), non-progress of labour in 9 (5.45%) and cephalo-pelvic disproportion in 8 cases (4.84%). In Mahapatro's study, in which meconium stained liquor with fetal distress was found to be the most common indication for LSCS (65.5%)⁹. In the study by Akhtar P et al¹², caesarean section was done in view of meconium stained liquor with fetal distress in 32% cases, non-progress of labour in 25.3% cases and failure of induction in 24% cases.

In this study most common (5.45%) complication was post-partum haemorrhage (PPH). Others were perineal tear in 4.84% and cervical tear in 3.03% of cases. In study conducted by Patel N et al¹³, 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 postpartum haemorrhage in 6 patients (20.47%).

In this study, respiratory distress syndrome was the most common fetal complication found in 6.66%, meconium aspiration syndrome was present in the 4.84% of cases, while hyperbilirubinemia was present in 3.64% and death was found in 3.03% cases. Kabbur et al¹⁴ found meconium aspiration syndrome as most common fetal complication in postdated neonates .

NICU admission rate was 11.51% . As per various studies, NICU admission rate is increased in postdated pregnancies¹⁵. Most common indication of NICU admission was asphyxia neonatorum.

Most of the neonate had APGAR score at 5 min >7(91.52%) which is in concordance with Singh S et al¹⁶ and Dobariya PV et al⁷ .

Limitations :

This was an observational study .So it was prone to bias .The study population was small and duration was short.

Conclusions:

Postdated pregnancy is associated with fetal, neonatal and maternal complications including morbidity and perinatal mortality. Postdated pregnancies require early detection, effective and proper planning of management to reduce maternal and neonatal morbidity. More trainings of peripheral health workers are required for calculation of accurate dating, making diagnosis and proper management to reduce its incidence with subsequent complications.

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