Section: Obstetrics & Gynaecology

Original Research Article

OUTCOMES OF PREGNANCIES EXTENDING BEYOND 40 WEEKS: MATERNAL AND NEONATAL PERSPECTIVES

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ABSTRACT

Background: This study aimed to evaluate maternal and perinatal outcomes in pregnancies extending beyond 40 weeks of gestation.

Materials and Methods: A prospective study was conducted in the Department of Obstetrics & Gynaecology, Dr. Rajendra Gode Medical College and Hospital, Amravati, India, from July 2024 to December 2024. It included 114 patients with uncomplicated prolonged pregnancies meeting inclusion criteria.

Results: Prolonged pregnancy incidence was higher in multigravida (55.26%) than primigravida (44.73%). Full-term normal delivery (FTND) occurred in 62.28% of cases, while cesarean section (LSCS) rate was 37.71%. Labor was induced in 49.12% of participants. Maternal complications included postpartum hemorrhage (PPH; 6.14%), cervical tear (5.27%), wound gape (3.51%), and shoulder dystocia (2.63%). Neonatal birth weight distribution was >3.5 kg (6.14%), >3 kg (38.59%), and <3 kg (55.26%). Neonatal Intensive Care Unit (NICU) admissions were primarily due to meconium-stained amniotic fluid (MSAF; 20%), fetal distress (20%), premature rupture of membranes (PROM; 20%), and intrauterine growth restriction (IUGR; 20%). Common LSCS indications were meconium-stained liquor (27.91%), failed induction (18.61%), and fetal distress (13.95%).

Conclusion: Pregnancy beyond 40 weeks warrants timely termination, with induction of labor emerging as the preferred approach. Induced patients demonstrated better outcomes, and post-term pregnancy management need not prioritize immediate operative interventions. This study underscores the safety and efficacy of induction in reducing maternal and neonatal risks while minimizing unnecessary surgical procedures.

Keywords: Full-term normal delivery (FTND), Neonatal Intensive Care Unit (NICU), Postpartum hemorrhage (PPH), Premature rupture of membranes (PROM), Intrauterine growth restriction (IUGR), Lower segment cesarean section (LSCS).

INTRODUCTION

A pregnancy is said to be term when it is between 37 weeks and 42 weeks of gestation.[1] The most common cause of prolonged pregnancy is inaccurate dating. The risk factors are primiparity, maternal genetic factors, prior postdatism and obesity. Criteria for diagnosing postdates are corre-lation of menstrual history, clinical findings, and ultrasonography. Ultrasonographic dating in early trimester can improve reliability of Estimated Date of Delivery.[1] Postdated pregnancies are associated

with fetal hypoxia, fetal death, asphyxia, meconium aspiration syndrome, oligohydramnios, macrosomia, fracture, nerve paralysis, atelectasis, hypoglycemia and stillbirths.[2] The maternal risks include increase in labor dystocia, perineal injury cervical tear, operative vaginal delivery, cephalopelvic disproportion, increase in rate of caesarean section, and postpartum hemorrhage.[1] In our present study, the fetomaternal outcome was studied in pregnancies beyond 40 weeks of gestation.

MATERIALS AND METHODS

This prospective study was conducted in the Department of Obstetrics & Gynaecology at Dr. Rajendra Gode Medical College and Hospital, Amravati, India, over a six-month period from July 2024 to December 2024. The study initially enrolled 136 pregnant women presenting with uncomplicated prolonged pregnancies. Of these, 22 patients were lost to follow-up, resulting in a final sample size of 114 participants who met the study's inclusion and exclusion criteria.

Inclusion Criteria

Pregnant women with gestational age beyond 40 weeks.

Age between 20 and 32 years.

Regular menstrual cycles with a reliably known last menstrual period, or confirmation of gestational age by an early trimester ultrasound scan.

Singleton pregnancy with vertex presentation.

Exclusion Criteria

Patients with uncertain gestational dates.

Pregnancies complicated by medical or obstetric conditions (not specified in this excerpt but typically includes conditions such as preeclampsia, gestational diabetes, multiple gestations, or malpresentations).

All eligible patients were assessed according to a standardized protocol, including detailed history, clinical examination, and relevant investigations. Data regarding maternal demographics, obstetric history, labor management, delivery outcomes, and neonatal parameters were collected and analyzed. The study adhered to ethical guidelines and obtained informed consent from all participants.

RESULTS

Table 1: Sociodemographic details of study participants

GRAVIDA	No. of patients	PERCENT
PRIMIGRAVIDA	51	44.74
MULTIGRAVIDA	63	55.26
TOTAL	114	100

Prolonged pregnancy was seen to be 55.26% in multigravida whereas 44.74% were primigravida.

Table 2: Mode of delivery

	No. of patients	Percent
FTND	71	62.28
LSCS	43	37.72
TOTAL	114	100

The caesarean section rates were 37.72% and full-term normal delivery were around 62.28%.

Table 3: Onset of labour

	No. of patients	Percent
SPONTANEOUS	58	50.88
INDUCED	56	49.12
TOTAL	114	100

50.88% patients had spontaneous labour whereas 49.12% patients were induced.

Table 4: Mode of delivery in induced patients

	No. of patients	Percent
FTND	44	78.57
LSCS	12	21.43
TOTAL	56	100

Among the 56 patients who underwent induction of labor, the majority (78.57%) achieved a full-term normal delivery (FTND), while 21.43% required a lower segment cesarean section (LSCS). This suggests that induction of labor in prolonged pregnancies is generally effective, with a high likelihood of successful vaginal delivery and a relatively low rate of cesarean intervention.

Table 5: Maternal complications

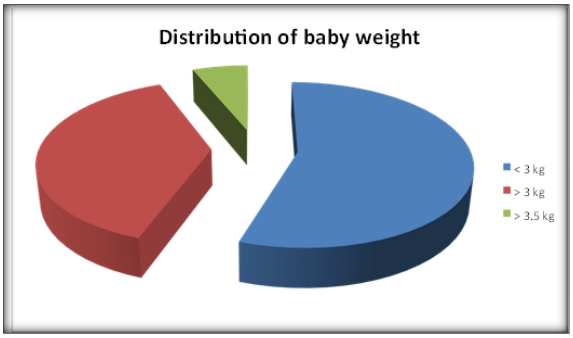
	No. of patients	Percent
PPH	7	6.14
CERVICAL TEAR	6	5.27
WOUND GAPE	4	3.51
SHOULDER DYSTOCIA	3	2.63

NO COMLICATIONS	94	82.45
TOTAL	114	100

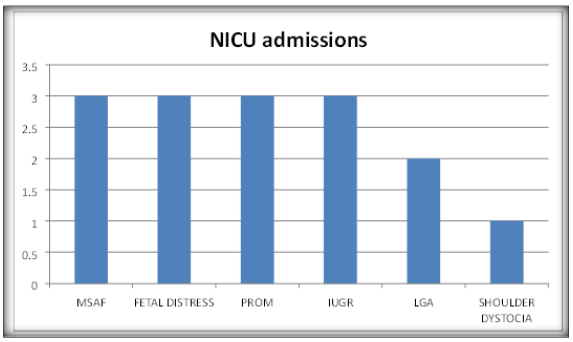
In this study of 114 patients with prolonged pregnancy, the vast majority (82.45%) experienced no maternal complications. The most common complication was postpartum hemorrhage (6.14%), followed by cervical tear (5.27%), wound gape (3.51%), and shoulder dystocia (2.63%). This indicates that while maternal complications can occur in prolonged pregnancies, they are relatively uncommon, and most patients have an uncomplicated course.

Table 6: Fetal outcome

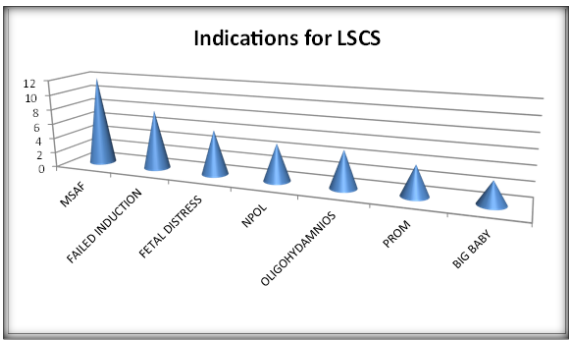
	No. of patients	Percent
MSAF	35	30.70
FETAL DISTRESS	12	10.52
PROM	9	7.89
OLIGOHYDRAMNIOS	8	7.02
IUGR	3	2.64
NO COMPLICATIONS	47	41.23
TOTAL	114	100



Graph 1: Showing distribution of baby weight



Graph 2: Showing NICU admission



Graph 3: Showing indication for LSCS

DISCUSSION

The present study demonstrates that prolonged pregnancy was more prevalent among multigravida women (55.26%) compared to primigravida women (44.73%). This trend is consistent with the findings reported by Alexander et al,[3] and Farhat et al,[4] who also observed a higher incidence of post-term pregnancies in women with previous childbirth experience. The reasons for this may include physiological adaptations in the uterine environment or cervical tissue following previous pregnancies, which could influence the timing of labor onset.

The caesarean section (LSCS) rate in our cohort was 37.71%, while the rate of full-term normal delivery (FTND) was 62.28%. These rates closely mirror those reported by Luckas et al., who found similar proportions of operative and vaginal deliveries in prolonged pregnancies[5]. The relatively high LSCS rate may be attributed to increased fetal and maternal risks associated with post-term gestation, such as fetal distress, failed induction, and meconium-stained amniotic fluid.

The induction of labor was performed in 49.12% of cases, which is somewhat higher than the 20–40% range cited by various authors. However, our results are in agreement with the studies by Shime and Schneider, who also reported induction rates approaching 50% in prolonged pregnancies[6]. The higher induction rate in our study could be due to a proactive approach to minimize maternal and perinatal complications associated with extended gestation.

Maternal complications observed included postpartum hemorrhage (6.14%), cervical tear (5.27%), wound gape (3.51%), and shoulder dystocia (2.63%). These findings are comparable to those of Caughey et al,[7] and Shinge et al,[8] who documented similar complication rates in post-term pregnancies. The increased risk of such complications underscores the importance of vigilant intrapartum monitoring and timely intervention in prolonged gestations.

Regarding neonatal outcomes, the distribution of birth weights revealed that the majority of infants weighed less than 3 kg (55.26%), with 38.59% weighing more than 3 kg and 6.14% exceeding 3.5 kg. This pattern may reflect the heterogeneity in fetal growth trajectories among prolonged

pregnancies, possibly influenced by placental function and maternal factors.

NICU admissions were most frequently necessitated by meconium-stained amniotic fluid (MSAF), fetal distress, premature rupture of membranes (PROM), and intrauterine growth restriction (IUGR), each accounting for 20% of admissions. These findings highlight the spectrum of perinatal risks associated with pregnancies extending beyond 40 weeks, particularly the increased likelihood of fetal compromise and the need for specialized neonatal care.

The primary indications for LSCS in our study were meconium-stained liquor (27.91%), failed induction (18.61%), and fetal distress (13.95%). These indications are consistent with those reported by Alexander and Macer et al,[9] as well as Hemistad et al,[10] who identified similar patterns in the reasons for operative delivery in post-term pregnancies. The predominance of meconium-stained liquor as an indication reflects the heightened risk of fetal hypoxia and aspiration in prolonged gestations.

In summary, the findings of this study are in line with existing literature and reinforce the need for careful monitoring and timely intervention in pregnancies that extend beyond 40 weeks. By identifying the common maternal and neonatal complications, as well as the primary reasons for operative delivery, our study contributes valuable insights that can inform clinical management strategies to optimize fetomaternal outcomes in prolonged pregnancies.

CONCLUSION

This study warrants that pregnancy beyond 40 weeks should be terminated. According to our study, termination of choice is induction of labor. We observed that the induced patients had a better outcome. The mere fact that the pregnancy is post term does not necessitate a hasty line of management towards operative procedures.

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