



RESEARCH ARTICLE

A CROSS SECTIONAL STUDY OF MATERNAL AND PERINATAL OUTCOME IN CASES OF POSTDATES AT Urban MEDICAL COLLEGE, NELLORE

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ABSTRACT

Introduction: Any pregnancy which passed beyond the EDD is called prolonged pregnancy and when it crossed beyond 42 weeks is called postmaturity. There is significant increase in perinatal morbidity and mortality due to past date.

Aim: To study the maternal and perinatal out come in cases of past dates.

Methodology: A cross sectional study was conducted for one year in the department of OBG in ACSR Medical College & General hospital Nellore. During this period total of 100 cases were randomly selected. Cases who crossed 40 weeks of gestation were induced. 30 patients came in spontaneous labour with greater than 41 weeks. A preformed proforma was used to collect data and which are analysed later.

Results: Among 3680 cases of labour patients who attended AC Subba reddy medical college, there were 380 cases of past dates. The incidence of past dates was 13.98%. 100 cases were randomly selected. 85% had regular antenatal check ups. 60% cases are primiparous and 40% are multiparas. 70% cases were induced with oxytocin, misoprostol and by sweeping membranes. 69% cases had vaginal delivery. 1 case had vacuum application and 30% cases had LSCS. There was one perinatal mortality due to congenital anomalies of the baby and no maternal mortality.

Conclusion: perinatal morbidity, mortality, and maternal morbidity can be significantly reduced by timely intervention with fetal assessment and induction of labour at 41 weeks.

INTRODUCTION

The International definition of prolonged pregnancy, endorsed by the American college of obstetricians and gynaecologists (2013a) is 42 completed weeks or 294 days more from the first day of the last menstrual period (1). There are large variations in menstrual cycle lengths in normal women even with precisely recalled menstrual dates (Munser and associates 1992). There is no accurate method to identify the truly prolonged pregnancy. The proportion of births at 42 weeks or longer was 6.4% when based on the last menstrual period alone. Similarly, sonographic pregnancy dating at <12 weeks resulted in a 2.7% incidence of post term gestation compared with 3.7% in a group assessed at 136 to 24 weeks (Caughy 2008). These findings suggest that menstrual dates are frequently in accurate prediction of post term pregnancy. Other studies which confirmed these observations (Bennett 2004, Joseph 2007, Wingate 2007) The term postdates is inadequate because there is no definition of the dates the term refers to. The definitions of post term pregnancy generate erroneous idea that 42 weeks is the limit between normality and abnormality, more logical and more useful to the clinician and the patient is to define this limit as the time, when the dangers of prolonging the pregnancy exceed the fetal and maternal dangers associated with delivery.

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Most of the information collected in the last 20 years indicate that this stage is reached prior to 42 weeks. Therefore it seems reasonable to encompass in this topic all pregnancies extending beyond the EDD (prolonged pregnancies) and minimize or ignore the limit between term and post term gestation. The incidence of prolonged pregnancy is 3 to 4% of all gestation. The most common cause of prolonged pregnancy is an error in clinical estimation of the gestational age, others are placental sulfatase deficiency, which plays a critical role in the synthesis of placental estrogens that are necessary for the development of gap junctions and prostaglandin receptors in the myometrial cell. In anencephaly lack of development of the hypothalamus negates the production of corticotrophin releasing hormone and the stimulation of the pituitary-adrenal-placental axis necessary for the initiation of parturition. Previous history of post term pregnancy has 50% risk of recurrence at least. When any pregnancy advances beyond the EDD perinatal mortality and fetal morbidity also increase (Chang 2008). (So interference of pregnancy is done beyond 41 weeks provided the maturity of fetus is ascertained) Moster and associates 2010 found increased rates of cerebral palsy in post term births. Low IQ at age births in children born >42 weeks. Yang coworkers conversely, autism was not associated with post term birth (Gardener, 2011). The incidence of post maturity syndrome was 10% between 41 and 43 weeks. Shimelar & colleagues (1984). The incidence increased to 33% at 44 weeks, associated oligohydramnios increases the likelihood of post

maturity Trimmer and associates 1990 reported that 88% of infants were postmature if there was oligohydramnios defined by a sonographic maximal vertical amniotic fluid pocket that measured < 1 cm at 42 weeks.

Aims and objectives

- To determine maternal morbidity in the form of mode of delivery in pastdates.
- To determine fetal outcome in the form of NICU admission, APGAR score, mortality, birth weight.

MATERIALS AND METHODS

The study was conducted for 1 yr for m Dec 2015 to Dec 2016 in Acsr Medical College Nellore. There were a total of 3680 deliveries in this total duration. Among this there were 380 cases of pastdates. We consider pastdates as pregnancies which crossed beyond EDD. Postmaturity as >42 weeks of gestation. 100 cases were randomly selected. A proform containing entire patient details collected. Detailed history, physical examination and local examination done in all patients. Necessary investigations pertaining to case was done. Gestational age is confirmed at admission with regularity of cycles. Fundal height estimation, USG assessment and palpating the fetal parts. The inclusion criteria for our study was cases of past dates with cephalic presentations,exclusion criteria was irregular cycles, abnormal presentation, multiple pregnancy, preeclampsia, heart diseases and diabetes. In our institute we admit the patients of pastdates> 40 weeks. Induction of labour is done either by medical, mechanical or surgical methods. Few patients came in spontaneouslabour in whom ifcontractions are less then augmented depending on cervical findings. Labour progress is monitored by partograph. Admission testCTG is done.

RESULTS

There were 380 cases of pastdates, the incidence being 13.89 %

Table 1. Regularity of antenatal check up and incidence of pastdates

ANC	NO OF CASES	%
BC	85	85
UB	15	15

Table 2. Relationship of age and incidence of past dates

AGE	NO OF CASES	%
<20	10	10
21-25	70	70
26-30	15	15
>30	5	5

Table 3. Realationshipof parity and incidence of past dates

Parity	No:cases	%
Primi	60	60
Multi	40	40

Table 4. Relationship of duration of pregnancy and incidence of pastdates

Duration of pregnancy	No;of cases	%
40.1- 41 weeks	75	75
41.1- 42weeks	22	22
>42	3	3

Table 5. Mode of delivery in patioents of pastdates

Mode of delivery	No:of cases	%
Normal	69	69
Lscs	30	30
Ventouse	1	1
Foreceps	0	0

Table 6. Relationship of amniotic fluid index in patients of past dates

AFI	No:cases	%
< 5	20	20
Adequate	80	80

Table 7. Relationship of parity with mode of delivery

Parity	Normal	Lscs	Ventouse	Forceps
Primi	3 9	2 0	1	0
Multi	3 0	1 0	0	0

Table 8. Relationship of past dates with labour

Labour	No:cases	%
Spontaneous	30	30
Induced	70	70

Table 9. Relationship of pastdates with mode of delivery and APGARscore

Mode of delivery	8-10	4-7	<4
Normal	66	2	1
Lscs	29	0	1
Ventouse	0	0	1
Forceps	0	0	0

Table 10. Indications of LSCS in patonts of past dates

Fetal distress	15
Cpd	10
Failed induction	3
Early signs of obstrectured labour	2

Table 11. Birth weight in patioents of past dates

Birth weight	No:cases	%
< 2.5	13	13
2.6 -3	42	42
3.1 – 3.5	32	32
3.6 – 4.0	10	10
Morethan 4	3	3

DISCUSSION

The incidence of prolonged pregnancy in our study was 13.89 %.The incidence of post term pregnancy ranged 4 to 19% (Divon .2008) in our study the incidence of past dates is common with primiparity. Common in 20-25 age group.This is because most of them are belonging to rural areas and get married earlier by 18 years of age.The incidence is 5% in womenwith age greater than 30 years. Pre pregnancy body mass index [BMI] and nulli parity were significantly associated with prolonged pregnancy. Caughey 2009 – 2011 also reported similar associations.The incidence of post maturity in our study was 3%(42 weeks).22cases presented at 41.1 till42 weeks and 75% in 40.1 to 41 weeks.Shine&collegues (1984)found this post maturity syndrome in 10%of pregnancies between 41 and 43 weeks.there is decreasingtrends of postmaturity as most of

cases are admitted after EDD and induction of labour was done. Zhang and colleges (2010) studied live births in USA from 1992 through 2003 and reported dramatic increase in labour induction rates at 41 and 42 weeks gestation. In other studies the rate of cesarean section was 17%, 20 – 25% and 18% respectively. The rate of cesarean section was 30% in our study. Among these 20% cases are primary cesarean cases and 10% of LSCs in multiparous women. Caughey et al 2007 found primary cesarean section was 9.0%, 14.0%, and 21.7% in 40, 41 and 42 weeks of gestation respectively. In our study the common indications being fetal distress (15 cases out of 30) and cephalopelvic disproportion (10 cases out of 30). Caughey et al 2007 found abnormal FHR monitoring patterns and CPD at 40, 41 and 42 weeks were 19.6%, 23.55% and 27.55% and 26.2%, 31.4% and 38.5% respectively. Most of the evidence including a Cochrane review of 19 trials reporting on 7984 women (Gulmezoglu et al 2006) and a meta analysis of 16 studies (Sanchez-Ramirez et al., 2003) indicate that women with prolonged pregnancies have better outcomes with a policy of labour induction at 41 weeks gestation than with a policy of expectant management with serial fetal monitoring. This policy reduces not only perinatal mortality but also cesarean section rate. 80% of cases in our study had adequate liquor both clinically and through USG. 20% of cases had decreased liquor volume.

The cause of oligohydramnios in prolonged pregnancy seems to be diminished fetal urine production (Trimmer et al 1990). The four quadrant method (Phelan et al 1987) is most popular method to evaluate amniotic fluid volume. The incidence of cesarean section increase due to late decelerations due to uteroplacental insufficiency and variable decelerations due to cord compression in past dates with oligohydramnios. In majority of cases fetal distress result from umbilical cord compression secondary to oligohydramnios (Heveno et al 1984). In minority of cases they are the result of placental insufficiency (Silver et al., 1988). The fetal outcome with APGAR score was 8-10 in 95% of cases and 2 cases had 4-7 and 3 cases had APGAR score < 4. There was 1 case of perinatal mortality in our study. Baby died due to congenital anomalies. Perinatal mortality and morbidity increased in postdated pregnancy, could be reduced by timely and judicious induction of labour (Bresadola 1995, DC Dutta 2002). NICU admission in 6 cases most of babies were weighing between 2.5-3kg i.e. 45%, only 3 cases are macrosomic with birth weight > 4 kg. Nahum and colleagues 1995 confirmed that fetal growth continues until at least 42 weeks. Ling and associates (2007) showed that umbilical blood flow did not increase concomitantly. Previous studies have shown about 14% and 25.7% respectively [Ratnam and Alan 2007]. The maternal morbidity in our study was 3 cases who had postpartum haemorrhage and 1 case had postpartum eclampsia and 1 case of face to pubis delivery with III perineal tear. There was no puerperal sepsis or postpartum wound infection.

Conclusion

Past dates is common during pregnancy which is considered as a high risk factor. There is significant increase in perinatal morbidity in the form of low APGAR score. Meconium stained liquor, NICU admissions and perinatal mortality, maternal morbidity is also high with increased cesarean section, PPH, abnormal instrumental deliveries, wound

infections etc. These complications can be minimized by regular antenatal check ups, confirming the gestational age, induction of labour at 41 weeks of gestation and health education.

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