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Original Research Article

Maternal and fetal outcome in post term pregnancy

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ABSTRACT

Background: The term delivery is defined as that occurring between 259 and 294 days of pregnancy from the last menstrual period. If the pregnancy exceeds this period, it is called as post term pregnancy. Our center is in rural area where most of the patients are unbooked or even booked patients are also loss of follow up. So, this study was done to know the incidence of prolonged pregnancy and maternal and fetal outcome in case of prolonged pregnancy in our rural population.

Methods: This study was a retrospective observational study for 1 year, to analyze the maternal and fetal outcome of post term pregnancies. Data was collected from hospital record and analysed.

Results: Out of 5210 total deliveries 1.49 % were beyond 42 wks. 57.69 % patients delivered vaginally whereas 42.3 % patients needed cesarean section. 6.41 % neonates developed meconium aspiration syndrome and 15.38 % of neonates needed NICU admission for different indications.

Conclusions: This study concluded that prolonged pregnancy is associated with adverse outcomes like fetal distress, meconium aspiration syndrome and more neonatal ICU admissions. The outcome of prolonged pregnancy can be improved by proper counselling for follow up during pregnancy and proper monitoring and appropriate management during labour.

Keywords: Fetal distress, Induction of labour, Maternal and fetal outcome, Post term pregnancy

INTRODUCTION

The term delivery is defined as that occurring between 259 and 294 days of pregnancy from the last menstrual period (LMP).¹ If the pregnancy exceeds this period, it is called as post term pregnancy (PTP). 11 % of all the pregnant women remain undelivered after 42 weeks.² Prolongation of pregnancy beyond 40 weeks occurs more frequently, in about 1 out of 10 pregnancies.² Dating by Ultrasonography (USG) in early pregnancy improves the reliability of expected date of delivery (EDD). The incidence of post term pregnancy depends on whether the calculation is based on the history or early pregnancy ultrasonography is also used to find the EDD.^{3,4} A series

of changes occur in the amniotic fluid, placenta and fetus which are associated with prolonged gestation. It has been reported that in a pregnancy which has crossed the EDD, there is an increased risk of intrapartum fetal distress mostly due to oligohydramnios, meconium stained liquor, macrosomia, fetal post maturity syndrome and cesarean delivery.² Most serious complication, post term pregnancy is meconium aspiration syndrome which had mortality upto 60% but now it reduced due to nasopharyngeal aspiration of newborn before 1st breath. Because of these complications associated with post term pregnancy is considered as high-risk pregnancy. Despite these complications universal delivery of all women who have reached or beyond EDD is not recommended

because of high incidence of failed induction and cesarean deliveries (in case of unfavorable cervix).² Our center is in rural area where most of the patients are unbooked. So, this study was done to find out the incidence of post term pregnancies and to analyze the maternal and fetal outcome in these pregnancies at our center.

METHODS

It was a retrospective observational study for 1 year from February 2016 to February 2017 in the Department of Obstetrics and Gynecology of Uttar Pradesh University of Medical Sciences (UPUMS), Saifai, Etawah. The patients with regular menstrual cycle with known last menstrual period, admitted to the hospital beyond 42 weeks gestation and delivered at our hospital were included in the study. Patients with multiple gestation, hypertension, diabetes mellitus and other medical disorders were excluded from study. Data was collected from hospital records. Booking status of cases were also noted. Booked patients were those who attended antenatal clinic in any hospital 3 or more times during pregnancy. Cases with <3 visits during pregnancy, referred cases from self-home or by traditional birth attendants were classified as unbooked.

RESULTS

The total no. of deliveries over 1 year period were 5210, out of which 78 patients were beyond 42 weeks of gestation so the incidence of post term pregnancy was 1.49% at our center. Majority of patients (91.10%) were in the age group of 20-30 years age group, only 6.7% patients were in age group >30 yrs. 55.17% patients were primigravida.

Table 1: Demographic distribution.

Parameter		Total number (n)	%
Age group	20 -30 years	71	91.0
	>30 years	7	8.97
Parity	Primigravida	43	55.12
	Multigravida	35	44.87
Booking status	Unbooked	47	60.25
	Booked	31	39.74

The number of unbooked cases were more in this study (60.25%) and the booked patients were also not had proper follow up, may be due to illiteracy and lack of awareness.

Table 2: Mode of delivery.

Mode of Delivery	No. of patients (n)	%
Vaginal delivery	42	53.84
Operative vaginal delivery	3	3.84
Cesarean section	33	42.30

At our center we do induction at 40+ weeks because of loss of follow up of patients and perinatal complication associated with post term pregnancy.

Table 3: Methods of induction of labour.

Method	Total number (n)	%
Prostaglandine gel	17	70.83
Intracervical foley catheter	2	8.33
Oxytocin	5	20.83

Table 4: Outcome of patients undergone induction of labour.

Outcome	Total number (n)	%
Vaginal delivery	15	62.5
Cesarean delivery	9	37.5

Out of total 78 patients, 24 (30.76%) patients needed induction of labour, out of which 70.83% were induced by Dinoprostone gel, 8.33% with intracervical foley catheter (inflated with 30 ml distilled water) and 20.83% with oxytocin, according to Bishop score.

Out of total 78 post term patients, 45 (57.6%) patients delivered vaginally and 33 (42.30%) patients needed cesarean section for different indications. Whereas out of total induced patients (24 patients) 37.5% patients needed Cesarean section. Birth weight of 23.07% neonates were >3 kg. Only 7 (8.97%) neonates were of birth weight >4 kg. 6.41% neonates developed meconium aspiration syndrome. 15.38% of neonates needed NICU (neonatal intensive care unit) admission for different indications.

Table 5: Perinatal outcome.

Outcome variable	Total no. of patients (n)	%	
Apgar score <6	7	8.97	
IUGR	7	8.97	
Birth wt.	2.5-3 kg	50	64.10
	3.1 kg-4kg	18	23.07
	>4 kg	7	3.84
Meconium aspiration syndrome	5	6.41	
NICU admission	12	15.38	
Still births	2	2.56	

DISCUSSION

In the study period there were total 5210 deliveries in which the incidence of post term pregnancy was 1.49% which was almost similar to study done by Nimbargi V, who reported the incidence of 1.3 % and Zeitin et al who reported the incidence ranging between 0.4 to 7.1%.^{5,6} The incidence of post term pregnancy in present study is lower than the study conducted by Ingemarsson et al, Ahanya et al and by Marahatta R et al in Nepal, who

reported the incidence of postdated pregnancy 8.3%, 7.6% and 4.6% respectively.⁷⁻⁹ This lower incidence of post term pregnancy in our study may be because we do induction of labour at 40+ weeks in our centre. In present study, most of the patients were in age group <30 yrs (91.10%) which was similar to the study conducted by Eik-Nes SH in which 80.6% patients were in age group <34 yrs.³ This may be because mostly reproduction occur in this age group in our country.

In this study, the rate of cesarean section was 42.30% which was less than in the study conducted by Nimbargi V et al in which cesarean rate was 61.3%.⁵ In this study meconium aspiration syndrome was found in 6.41% neonates which was similar to the study conducted by Nimbargi V at Pune in which it was affecting 7.5% neonates.⁵ 15.38% neonates needed intensive care for different indications in present study which was similar (12.5%) to study conducted in Pune by Nimbargi V.⁵

In present study 3.84% infants were having >4 kg birth weight which was less than the study conducted by Beischer NA et al which showed 18.2% infants of birth weight >4 kg.¹⁰ There were 2.56% still births in this study which was similar to the study conducted by Ingemarsson et al in which still birth was 2.26% and was less than study conducted in Nepal by Marahatta R who showed 3.7% still birth in their study.^{7,9}

CONCLUSION

This study concluded that post term pregnancy is associated with adverse outcomes like fetal distress, meconium aspiration syndrome and more neonatal ICU admissions. There is increased number of cesarean sections in case of prolonged pregnancies. The adverse outcome can be reduced by counselling for antenatal checkup and follow up during pregnancy and proper monitoring during labour.

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