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A CLINICAL STUDY OF POST TERM PREGNANCY WITH ITS COMPLICATIONS

Gynecology

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ABSTRACT

Background: A prospective observational study to find out the incidence of postdated pregnancies and maternal and perinatal complications in these pregnancies.

Method : Patients who have completed 40 wks of gestation, who were sure of LMP along with 1st trimester obstetrics scan were included. Patients not sure of LMP and medical disorders are excluded.

Results: Postterm pregnancy is associated with adverse outcomes like fetal distress, meconium aspiration syndrome and more neonatal ICU admissions. Total 1580 cases were selected out of which 158 cases were postdated pregnancy. Incidence of induction rate and hence operative deliveries is more in these pregnancies. Perinatal mortality and moere NICU admissions were required.

Conclusions: Considering this policy of early intervention should be undertaken in postdated pregnancy to avoid maternal and perinatal complications.

KEYWORDS

Maternal complications, postdatism,perinatal ,morbidity.

INTRODUCTION:

The **American college of Obstetricians and Gynecology (ACOG)** and the **WHO** had defined Post –term Pregnancy as that lasts 42 weeks (294 days)or more from the first day of the last menstrual period[1,2] Recently, the ACOG has endorsed a recommendation that-

Early Term" (37-0/7 weeks of gestation through 38-6/7 weeks of gestation)

"Full Term" (39-0/7 weeks of gestation through 40-6/7 weeks of gestation)

"Late Term" (41-0/7 weeks of gestation through 41-6/7 weeks of gestation)

"Post Term" (42-0/7 weeks of gestation and beyond) to more accurately describe deliveries occurring at or beyond 37-0/7 weeks of gestation. [3]

Prolongation of pregnancy complicates up to 10% of all pregnancies and carries increased risk to mother and fetus.[2,3] post term perinatal mortality is gerater than that of term pregnancy in almost all studies reviewed[4].The growth and survival of most post dated infants suggests that the placenta uncommonly deteriorates with increasing length of gestation; thus the changes seen in fetuses afflicted with post maturity syndrome may not be explained by placental findings alone. Vorherr described 43rd week of gestation by cord blood oxygen content determination.[4] The combinations of continued fetal growth and arrested placental growth may lead to situation of decreasing placental nutrient reserve, compromised fetal circulation and eventually fetal distress.

Changes Associated With Prolonged Pregnancy

1.Amniotic Fluid Changes:

1.1 Quantitative Amniotic Fluid Changes

Amniotic fluid Peak – 38 wks --- 1000ml

40wks ---800ml

42 wks ---480ml

43 wks --- 250 ml

44wks --- 160ml

1.2 Qualitative Amniotic Fluid Changes

AF become milky and cloudy because of presence of abundant flakes of vernixcaseosa.

The phospholipids composition changes due to presence of large number of lamellar bodies released from fetal lungs.

Vernix raises the lecithin, sphingomyelin ration to 4:1 and more

2. Placental Changes

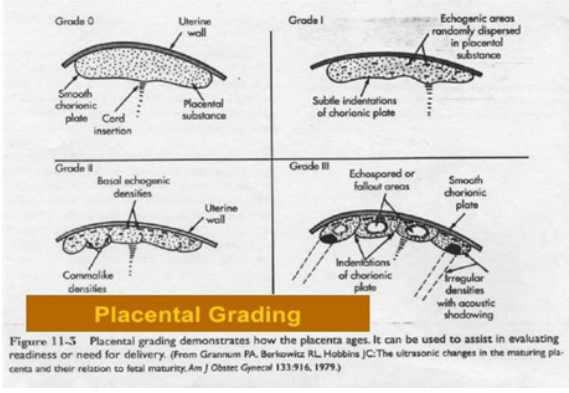

Figure 11-3 Placental grading demonstrates how the placenta ages. It can be used to assist in evaluating readiness or need for delivery. (From Grannum PA, Berkowitz RL, Hobbins JC:The ultrasonic changes in the maturing placenta and their relation to fetal maturity. *Am J Obstet Gynecol* 133:916, 1979.)

3. Fetal Changes :

3.1 Meconium Staining

3.2 Loss of Subcutaneous fat reserves (infant's appearance like that of a wizened old man)

3.3 Long Nails at the extremities.



Boyl et al found an incidence of post term pregnancy —

1. 7.5% when diagnosis was based on menstrual history.
2. 2.6% when diagnosis by eraly ultrasound examination.
3. 1.1% when diagnosis was based on concurrent menstrual history and ultra sound examination.

Our Hospital(UH) is a tertiary care center that also covers nearby rural areas 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 centre.

AIMS AND OBJECTIVES OF THE STUDY

1. To study the incidence of postdation and maternal and perinatal complications in these pregnancies.

2. To identify the risk factors associated with post - term pregnancy.

MATERIALS AND METHODS

The hospital based study will be conducted in a prospected manner for 2 months in the department of Obstetrics and Gynaecology, umaid Hospital, Dr.S.N,Medical college, Jodhpur.

Inclusion Criteria

All pregnant women with regular menstrual cycle with known last menstrual period or early trimester ultrasound admitted to our hospital beyond 40 weeks of gestation and delivered at our hospital.

Exclusion Criteria

Patients not sure of LMP. patients with multiple gestation , hypertension, diabetes mellitus and other medical disorders.

RESULTS

Total number of patients delivered in our hospital over 2 months was 1580 out of which 158 were post term pregnancy. So the incidence of post term pregnancy was 10% at our centre. Out of these 158 patients, 118 patients had gestation age beyond 40 weeks and up to 41 completed weeks: 40 patients were beyond 42 weeks of gestation.

Majority of patients (81%) were in age group of 20 – 30 years, only 19% were in age group of greater than 30 years.

Table 1 : DEMOGRAPHIC DISTRIBUTION

S.No	PARAMETERS	TOTAL NUMBER(n)		%
1	Age Group	20 – 30 years >30 years	128 30	81.1 18.9
2	Parity	Primigrande Multigrande	100 58	63.29 36.7
3	Booking Status	Unbooked Booked	70 88	44 55.69
4	Obesity		46	29.11

The number of unbooked cases were more in this study may be due to lack of awareness, illiteracy and negligence of family members towards pregnant women .obesity is the only modifiable risk factor for post – term pregnancy.

Table 2 : MODE OF DELIVERY

S.No	Gestation Age (in Weeks)	Vaginal Delivery	Caesarean Section	Operational Vaginal Delivery
1	40 – 41 weeks	66	50	2
2	Ø 42 weeks	24	16	

Table 3 : METHODS OF INDUCTION OF LABOUR

		GESTATION AGE IN WEEKS			
		40 – 41 weeks		>42 weeks	
Sl no		primigrande	multigrande	Primigrande	Multigrande
1	Cerviprime Gel (PGE 2)	40	15	12	6
2	Misoprost (PGE 1)	10	5	4	
3	Oxytocin	15	20	4	12
4	Mechanical Methods				
	a) Membrane stripping	02	4	-	0
	b)Aminiotomy	03	4	-	2

Once an obstetrician take decision for induction of labor, an assessment of the cervix for Bishop Scoring has to be done and accordingly modes of ripening of the cervix to be decided. Around 36 patients, taken for Caesarean section on account of failed induction or fetal distress.

Table 4 : PERINATAL OUTCOME IN POST PREGNANCY

Sl no	OUTCOME VARIABLE
1	APGAR Score <6
2	IUGR

3. Birth weight –
a) 2.5 – 3 kg
b) 3.1 – 4 kg
c) > 4 kg

4. Meconium aspiration syndrome NICU admission on account of

5. a) TTN
b) Birth asphyxia
c) Respiratory distress

6. Still birth

The incidence of perinatal morality rates at 42 weeks is twice as much as that 40 weeks and is increasing to fourfold at 43 weeks. Meconium aspiration is eight times more common prolonged pregnancy and its complications include pneumonia, pneumothorax, a requirement for assisted ventilation and development of pulmonary hypertention.

TABLE 5 : MATERNAL COMPLICATIONS

Sl no		Total Number (n)	%
1	PPH	8	5
2	Septicemie	2	1.24
3	Perineal Trauma	6	3.79

DISCUSSION :

The present study was conducted to find out the incidence of maternal complications,perinatal mortality and morbidity in postdated pregnancies. Total cases were 100 which were enrolled based on inclusion and exclusion criteria. Incidence of post dated pregnancies was more in age group 21 – 25 yrs followed by 26 – 30 yrs in study group. Majority of postdated patients were seen in age group of 25 – 29 yrs in this study. Beischer in his study found that majority of postdated patients belonged to the age group of 25 – 30 yrs, wjo;e Bancroft et al found that majority of patients belonged to 21 – 30 yrs[14,15] Reddy UM et al found in their study that women who are of advance maternal age are at higher risk of still birth throughout gestation the peak risk period is 37 to 41 weeks [16]. 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 labor at 40 + weeks in age group < 30 yrs (91.10%0 which was similar to the study conducted by Eik – Nes SH in which 80.6% patients were in age group <34 years [3]. this may bebecause mostly reproduction occur in this age group In our country. In this study, the rate of cesarean section was 42.3% which was less than that 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 et al 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).

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 counseling for antenatal checkup and fllow up during pregnancy and proper monitoring during labour.

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