

# POSTDATE PREGNANCIES; MODE OF DELIVERY AND OUTCOME OF THE FETUS

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**ABSTRACT...** **Objective:** The study was designed to determine the fetomaternal morbidity and mortality in post date pregnancies and to calculate various modes of delivery in post date pregnancies in our set up. Study design: Non interventional descriptive study. Setting: Gynea Unit- III Services Hospital, Lahore. Material and methods: The data was collected with the help of Proforma which was filled for every patient delivered at 40 weeks of gestation or above. The proforma included all points relevant to study. Results: The rate of meconium staining of liquor, fetal distress and caesarean section (C-section) increased significantly after 40 weeks gestation. Conclusion: The study shows that more chances of meconium staining, fetal distress and macrosomia in Post date patients. The study further shows that the induction and operative deliveries are more common mode of deliveries in post date patients.

## INTRODUCTION

The length of a normal pregnancy is 40 weeks from the 1st day of the last menstrual period, but there are certain deviations to this. Post date pregnancy is one that last longer than the established date of confinement also known as due date, whereas post term pregnancies last longer than 42 weeks<sup>1</sup>. Management of prolonged pregnancy is a subject of concern because of its known association with increased fetal morbidity and mortality. Women worry when they have not delivered by the expected date of delivery because they think post EDD is the same as prolonged pregnancy. Even doctors become anxious when a woman does not deliver by 41 weeks, because unexpected morbidity and mortality can

occur after this gestation. Hence the tests of fetal well being are usually instituted after 41 weeks<sup>2</sup>.

Post date pregnancy is associated with higher frequency of obstetrical complications and perinatal morbidity<sup>3</sup>.

In post date pregnancy perinatal mortality is 5/1000 b/w 37-42 weeks 9.4/1000 beyond 42 weeks and 50/1000 at 43 weeks<sup>2</sup>. Compromise to the fetus in prolonged-

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pregnancy is commonly due to Oligohydramnios. Incidence of meconium staining and meconium aspiration syndrome is 11.3% in 38 to 39 weeks, 19.4% in 40 to 41 weeks and 25% in pregnancy over 42 weeks<sup>4</sup>. Macrosomia is 3 to 7% more in post date pregnancy<sup>5</sup>. Maternal morbidity in post date pregnancy may occur due to increased incidence of prolonged labour and instrumental delivery. The risk of caesarean section is significantly increased<sup>6</sup>.

### OBJECTIVES

The main objectives of the study were:

1. This study was carried out to determine the fetal and maternal morbidity in post date pregnancies (40 - 42 weeks).
2. To calculate various modes of delivery in post date pregnancies (40 - 42 weeks).

### MATERIAL & METHOD

This study was carried out in the department of Obstetrics and Gynaecology Unit-III of Services Hospital, Lahore from October 16, 2004 to December 31, 2004 and July 15, 2006 to November 7, 2006.

It was a descriptive study in which 100 patients were studied. Convenience sampling technique was adapted as all patients who had been admitted either through OPD or Emergency were included in study. Patient who had any contraindication to vaginal delivery had medical disease complicating the pregnancies were excluded from the study.

The data were collected with the help of Proforma which was filled for every patient delivered at 40 or more weeks of gestation. This proforma included all points relevant to study and included complete history of the patient regarding age, parity, obstetric and gynaecological history, previous medical and surgical history.

General physical examination included pulse, blood pressure, temperature, pallor, state of hydration, edema, JVP and breast examination. Systemic examination of central nervous system, cardiovascular system, respiratory and gastrointestinal system was done.

Abdominal examination included fundal height, lie of fetus, presentation of fetus and auscultation of fetal heart sounds. Vaginal examination was done to assess bishop score. Investigations included cardiotocography (CTG), ultrasonography for Biophysical profile and fetal kick count chart.

The onset of labor whether spontaneous or induced, color and amount of liquor on spontaneous or artificial rupture of membranes (ARM) or intra-operatively, mode of delivery and indications for C-section and Apgar score for the neonates were noted.

In the end, the percentage of the patients who underwent spontaneous labor or induced with prostaglandin (PGE<sub>2</sub>), delivered vaginally or by C-Section and Apgar score at 1 and 5 minutes was calculated.

### RESULTS & TABLE

100 patients were studied in 6 month period. Out of 100 patients 45% cases were booked and 55% cases were unbooked (Table-I). Out of 100 patients 33 delivered spontaneously 60 undergone inductions and 7 Cesarean sections were performed. In 45% of patients, induction of labour was successful and they delivered vaginally. In 15% of patients, Cesarean section had to perform mostly due to fetal distress and failed induction (Table II). Five fetal deaths were recorded in study period (Table-III).

In 39% of the cases, meconium stained amniotic fluid was seen and mean gestational age in these cases was found to be 41 weeks 3 days (Table-IV).

10% of the babies were macrosomic weighing more than 4 kg. Mean gestational age in this case was 41 weeks and 3 days. (Table-V).

20% of the patients had fetal distress and mean gestational age at which distress occurred was 41 weeks and 3 days (Table-VI).

8 babies were admitted in intensive neonatal nursery for management. Seven of these were treated and discharged within a week. One perinatal death was seen (Table-VII).

Post natal and post operative complications were present in 11%, frequent problem was intrapartum maternal pyrexia (3%) and wound infection after caesarean section delivery (3%). 2 patients had postpartum hemorrhage (Table-VIII).

**Table-I. Distribution of cases for booked and un-booked status (n=100)**

Status	Frequency	%age
Booked	45	45
Un-booked	55	55
Total	100	100

**Table-II. Distribution of cases by mode of delivery (n=100)**

Mode of delivery	No. Of patients	%age
Spontaneous vaginal delivery	33	33
Induction vaginal	45	45
Induction cesarean section	15/0	15
Caesarean section	7	7
Total	100	100

**Table-III. Distribution of cases by fetal outcome for mean gestational age at delivery (n=100)**

Fetal outcome	Mean gestational age at delivery	No. of fetus
Alive	41 <sup>+2</sup>	95
Stillbirth	41 <sup>+5</sup>	1
Early neonatal death	41 <sup>+3</sup>	1
Intrauterine death	41 <sup>+4</sup>	3
Total	41 <sup>+3</sup>	100

**Table-IV. Distribution of cases by meconium staining for mean gestational age at delivery (n=100)**

Meconium	Mean gestational age at delivery	%age
Present	41 <sup>+3</sup>	39
Absent	41 <sup>+1</sup>	61
Total	41 <sup>+2</sup>	100

**Table-V. Distribution of cases by Macrosomia mean gestational age at delivery (n=100)**

Macrosomia	Mean gestational age at delivery	%age
Macrosomia	41 <sup>+3</sup>	10
Macrosomia shoulder dystocia	41 <sup>+6</sup>	1

**Table-VI. Distribution of cases by fetal distress for mean gestational age at delivery (n=100)**

Fetal distress	Mean gestational age at delivery	%age
Yes	41 <sup>+3</sup>	20
No	41 <sup>+1</sup>	80
Total	41 <sup>+2</sup>	100

**Table-VII. Admission in Intensive Care Nursery**

Mean gestational age	Details	Delivery mode
41 <sup>+5</sup>	Low apgar score meconium aspiration	Caesarean
41 <sup>+3</sup>	Transient bradycardia	Vaginal
40 <sup>+6</sup>	Low apgar score O supplementation	Vaginal
40 <sup>+2</sup>	Meconium aspiration	Cesarean
41 <sup>+3</sup>	Low apgar score sepsis meconium aspiration	Cesarean
41 <sup>+5</sup>	Shoulder dystocia fracture humerus	Vaginal
41 <sup>+1</sup>	Rule out sepsis	Cesarean
41 <sup>+4</sup>	Apnea, intunabation	Cesarean

**Table-VIII. Maternal complication**

Complications	No. of patients	%age
Pyrexia	3	3.0
Postpartum hemorrhage	2	2.0
Cervical tear	1	1.0
Gapped episiotomy	1	1.0
Episiotomy hematoma	1	1.0
Wound infection	3	3.0

**DISCUSSION**

Management of prolonged pregnancy is subject of concern because of its known association with increased fetal morbidity and mortality. The Society of Obstetricians and Gynaecologists of Canada clinical practice guideline assert that women who reach 41 weeks should be counselled appropriately regarding the higher risk<sup>7</sup>. Post date and post term pregnancies are at higher risk for meconium staining, shoulder dystocia, caesarean section, macrosomia and meconium aspiration<sup>8</sup>.

Prolonged pregnancy is the most frequent reason for induction of Labour. In this study 33 delivered spontaneously, 60 patients were induced and 22 Caesarean section had done. In the study by Freman and Rana S Caesrean section rate is also 25.6%.

The Canadian multicenter post term and post date pregnancy trial have completed 3 recent prospective randomized studies. No increase in the rate of caesarean section was found in patients who were randomized to routine induction of labour. In fact more caesarean section was performed in non induction groups and most frequent indication was fetal distress, neonatal outcomes were similar in both routine induction and non induction group<sup>7</sup>.

A meta analysis by Grant et al reviewed 11 trials and concluded that a policy of routine induction had a lower rate of perinatal mortality and morbidity and caesarean section demonstrating both fetal and maternal benefits when compared to expectant management<sup>9</sup>.

The farther pregnancy progresses beyond 40 weeks. The more likely it is that significant amount of meconium will be present. In my study 39% of patient's meconium is present. The incidence of meconium in study carried out by Ahuya SN is 35%<sup>10</sup>. Rana S found it to be 19%<sup>11</sup> while in study by Iqbal S it is 11%<sup>12</sup>.

James et al carried study also found that incidence of meconium increased when gestation age was more than 41 weeks 4 days<sup>13</sup>. Our study supports this view. As in most of patients with meconium stained liquor had mean gestation some where around 41 week and 3 days.

Incidence of macrosomia is 3 to 7 fold more in prolonged pregnancy than in term pregnancy. Our study shows in 10% patients macrosomia was present.

The study carried out by Iqbal S on management of prolonged pregnancy showed the incidence of macrosomia as 22%<sup>12</sup>.

Antepartum fetal jeopardy and intra partum fetal distress are mostly consequence of cord compression associated

with oligohydramnios in prolonged pregnancy 20% patients had fetal distress in this study.

The study by James et al, fetal distress was present in 14% of cases and gestational age at which incidence increased was found to be 41 weeks 4 days<sup>13</sup>. These results matches with our study, as 20% of patients had fetal distress and mean gestational age was 41 weeks 3 days.

The Yard Stick for antenatal care & intrapartum is perinatal mortality. The National Birth trust study of Britain reported that the lowest perinatal mortality was at 40 weeks, at 41 weeks the rate was almost the same as at 40 weeks, but by 42 weeks it had doubled and by 44 weeks of gestation the rate had rise more than three fold<sup>11</sup>.

Meta analysis of randomized controlled trials suggest that elective induction of labour at 41 weeks gestation, compared with expectant management with selective labour inductions is associated with fewer perinatal deaths and no increase in the caesarean section rate<sup>14</sup>.

Yudkin PL et al in their study determined that rate of unexplained stillbirth was highest among preterm deliveries fell to minimum at 39 to 40 weeks gestation than rose at 41 and 42 weeks<sup>15</sup>. Crowley studied slightly higher incidence of perinatal mortality in post date pregnancy. So he concluded that routine induction of labor after 41 week gestations appear to reduce perinatal mortality.

## CONCLUSION

Post date pregnancies are associated with higher frequency of obstetric complication and perinatal morbidity. There are high risk of meconium staining, shoulder dystocia, birth injuries, macrosmia, and fetal distress.

Prolonged pregnancy is most frequent indication for induction of labour. The method of induction should be tailored according to parity and cervical score to minimize the risk of failed induction and C-Section rate. The induction of labour and caesarean section are common

in postdate pregnancies. The result of this study are found to be comparable With other international studies.

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