



## A PROSPECTIVE STUDY OF POSTDATED PREGNANCY AND FETOMATERNAL OUTCOME

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**ABSTRACT** **Background-** Post dated pregnancy is one of the most common obstetric condition. Pregnancy is called term when it lies between 37 weeks to 42 weeks from the last menstrual period. If the pregnancy exceeds 40 weeks the it is called as post dated pregnancy . Overall incidence of post term pregnancy is 7%of all pregnancies **Methods-** The observational study was carried out in the department of obstetrics and gynecology in RNT medical college, Udaipur, India from July 2022 to September 2022. Total 100 post dated pregnancies enrolled in the study fulfilling the inclusion and exclusion criteria. Aim is to asses fetomaternal outcome in post dated pregnancy. **Results-** Maximum number of patients age group 21-25 years . In the present study maximum patients were primi parous it showed that prolonged pregnancy is more frequently associated with primi parity. In the present study after induction most of the patients got delivered vaginally. The present study also showed that risk of fetal distress increased with gestational age because of increased chances of meconium stained liquor which increases with gestational age. Because of increased risk of meconium aspiration, NICU admission rate increases with gestational age. **Conclusions:** The present study, we conclude that, the post dated pregnancy can be considered as a high risk factor from the point of view of fetal outcome as there is more fetal morbidity.

**KEYWORDS :** High risk pregnancies, Maternal mortality, Outcomes, Perinatal mortality, postdate pregnancies

### INTRODUCTION

Smooth expectation labour is the cherished dream of every pregnant woman.

Post-dated pregnancy has been defined as a pregnancy that persists beyond 40 weeks of gestation. The post-dated pregnancy, which likely occurs among less than 5% of gravidas has been associated with an increased perinatal mortality rate<sup>1</sup>. Galal M, Symonds I et al found that the incidence of stillbirth increases from 39 weeks onwards with a sharp rise after 40 weeks of gestation.

Induction of labour before 42 weeks of gestation has the potential to prevent these complications; however, both patients and clinicians alike are concerned about risks associated with induction of labour such as failure of induction and increases in CS rates.

There is a strong body of evidence however that demonstrates that induction of Manuscript received: 30th May 2019 Reviewed: 10th June 2019 Author Corrected: 17th June 2019 Accepted for Publication: 21st June 2019 labour at term and prior to 42 weeks of gestation (particularly between 40 and 42 weeks) is associated with a reduction in perinatal complications without an associated increase in CS rates. Therefore they postulated a policy of induction of labour at 41 weeks in post dated women could be beneficial with potential improvement in perinatal outcome and a reduction in maternal complications<sup>3</sup>. Perinatal morbidity has also been noted to be higher in post dated pregnancies including meconium and meconium aspiration syndrome, oligohydramnios, macrosomia, fetal birth injury, rate of non-reassuring fetal heart rate or fetal distress in labor, and rates of cesarean delivery<sup>4</sup>.

Risk of adverse perinatal and maternal outcome increases with increasing gestational age beyond term. To be expelled timely from the uterus is almost as important as to be nourished perfectly in it. To be born too late is likely to be disastrous.

The prolongation of pregnancy beyond 40 weeks occurs frequently that is 1 in every 10 pregnancies. Perinatal mortality and morbidity are increased in prolong pregnancy, perinatal mortality is two to three times in these prolonged gestation. Fetal mortality in pregnancies that exceed 41 weeks in length is almost doubled than that seen in patients who delivered between 40 to 41 weeks. Most obstetricians would in consequence elect to deliver their patients before 42 weeks of pregnancy were completed [5,6,7,8].

### AIMS AND OBJECTIVES

To evaluate the incidence of post-dated pregnancy  
To assess fetal outcome in post-dated pregnancy

### METHODOLOGY

This was a prospective observational study carried out in the department of obstetrics and gynecology, RNT Medical college Udaipur, India from July 2022 to september 2022 for a period of 4 months. A total 100 patients were included with non-random sampling method.

**Study subjects:** Study has been carried out of 100 patients randomly selected with pregnancy beyond the EDD irrespective of any gravidae.

**Sample size:** 100 patients randomly selected with pregnancy beyond the EDD.

**Data collection:** Study has been carried out of 100 patients randomly selected with pregnancy beyond the EDD irrespective of any gravidae. Primi or multi admitted in labour room of department of Obst. & Gynae at RNT Medical college Udaipur.

### Inclusion Criteria

- Low risk primi or multi whose LMP definitely known.
- Menstrual cycle regular .
- EDD crossed.
- The presentation must be vertex. Single ton intrauterine pregnancy.
- (EDD was calculated as per Naegeles formula).

### Exclusion Criteria

- Multiple gestation
- Non vertex presentation
- Any associated complications such as previous lower segment cesarean section (LSCS), malpresentations, placenta previa, abruption, PIH, gestational diabetes.
- Fetal anomalies.
- The study was done for limited period so it reflects the aptitude of that period only. Many patients did not follow up regularly during ANC and came directly during labor after crossing the expected date of delivery.

The follow-up of the mother was done in the following lines.

1. Induction / Spontaneous Labor
2. Mode of delivery 1. Vaginal delivery 2. LSCS 3. Instrumental delivery.
3. Apgar Score 1 Min and 5 Min, Weight of baby.

4. Gravida

**RESULTS**

Out of 2000 patients delivered, there were 100 postdated deliveries so the frequency of postdated pregnancy was 5%. Maximum 60 cases were of age group 20-25 years, 25 cases were of age group 26-30 years, and cases 13 were of age group 31-35 years. There were exception of two patients having age of 18 years were postdated and included in study.

| Age in years | No of cases | percentage |
|--------------|-------------|------------|
| 20-25 years  | 60 cases    | 60%        |
| 26-30 years  | 25cases     | 25%        |
| 31-35 years  | 13cases     | 13%        |
| 18 years     | 2 cases     | 2%         |

Majority cases were 54 cases primigravida (54%)

| parity       | No of cases | percentage |
|--------------|-------------|------------|
| primigravida | 54cases     | 54%        |
| P2           | 30cases     | 30%        |
| p3           | 11cases     | 11%        |
| p4           | 5 cases     | 5%         |

**Caesarean section.**

Among all participants who had undergone caesarean section, indication for caesarean section was fetal distress in 15, 11 have indication was failure of induction and 9 cases have oligohydrominos. Among 15 cases of fetal distress 10 out of which were fetal distress in induced patients and 5 patient was directly taken for emergency LSCS in view of non-reassuring fetal heart.

**Table 3: Distribution of participants according to their clinical parameters (new-born).**

| Birth weight | No of participants | percentage |
|--------------|--------------------|------------|
| <2.5kgs      | 11 babies          | 11%        |
| 2.5-3.5 kgs  | 76 babies          | 76%        |
| >3.5kgs      | 13 babies          | 13%        |

| Apgar Score At 1 Min | No Of Babies | Percentage |
|----------------------|--------------|------------|
| <4                   | 5 babies     | 5%         |
| 4-7                  | 42babies     | 42%        |
| >7                   | 53babies     | 53%        |

| Apgar Score At 5 Min | No Of Babies | Percentage |
|----------------------|--------------|------------|
| <4                   | 2babies      | 2%         |
| 4-7                  | 22babies     | 22%        |
| >7                   | 76babies     | 76%        |

The study was conducted in RNT MEDICAL COLLEGE ,department of obstetrics and gynecology, Udaipur, Rajasthan over a period of 3 months.

**Following results were obtained from the present study:**

Maximum number of patients age group 21-25 years .

In the present study maximum patients were primi parous it showed that prolonged pregnancy is more frequently associated with primi parity.

In the present study after induction most of the patients got delivered vaginally.

The present study also showed that risk of fetal distress increased with gestational age because of increased chances of meconium stained liquor which increases with gestational age. Because of increased risk of meconium aspiration, NICU admission rate increases with gestational age.

**DISCUSSION**

The aim of this study was to find out the frequency of post dated pregnancies and to know the maternal and fetal outcome beyond the expected date of delivery (EDD).

- According to the age of the patient

Among total 100 patients, range exist of 17 to 40 years of age and maximum participants 60 (60%) were included in the age group of 20 to 25 years of age. The least number, 2 patients were in the age group 18 years (2%), and 25 patients (25%) were in the age group of 26-30 years and 13 cases (13%) were between 31-35 years of age.

It seems that there is no correlation with maternal age and postdated

pregnancy. Paliulyt V et al, studied age distribution among pregnancy beyond 41 weeks of gestation and found no age relation.9

Mahapatro AK et al, observed in their study on pregnancy beyond 41 weeks of gestation that 55% cases were in the age group of 21 to 25 years.10

- According to gravidity of the patient

Nulliparity increases risk of prolonged pregnancy, but in various recent studies incidence of late term and postterm is equal or slightly increased in multigravida. Marahatta et al, studied distribution of parity and found 54% patients were multigravida. Amina FN et al, in their study found maximum (54%) patients were multigravida.19 Mahapatro et al, found maximum (72%) of patients were primigravida.14

However, in the present study maximum patients 54 (54%) were primigravida and 46 patients (46%) patients were multigravida.

- According to mode of delivery

In the present study, maximum patients 66 (66%) underwent vaginal delivery while 34 (34%) patient underwent LSCS .

Caughey AB et al, studied that maximum patients (68%) underwent spontaneous vaginal delivery, 17% patient required instrumental delivery and 14% patient required primary caesarean section.21 Shinge N et al, studied that maximum patients (53.7%) underwent spontaneous vaginal delivery, 9.5% patients required instrumental delivery and 37% patients required caesarean section as mode of delivery.11

- According to the indication of cesarean section

In the present study, indication for cesarean section was fetal distress in 15 patients and failure of induction in 11 cases , which were followed by oligo hydrominos in 9cases.

Incidence of caesarean section for fetal distress by Caughey AB et al, is 23.5% and 21.4% underwent caesarean section for CPD (21.4%). 12

- According to Apgar score at 1 minute

The majority 53 (53%) of the babies born to participants had Apgar score of >7 after 1 minute of birth, 42babies (42%) had Apgar score of 4-7, and 5 babies (5%) had Apgar score of <4

- According to Apgar score at 5 minutes

In the present study, the majority 76 (76%) of the babies born to participants were having APGAR score of >7 counted at 5 minutes after birth, 22 babies (22%) had APGAR score of 4-7, and 2 babies (2%) had APGAR score <4

**CONCLUSION**

From the present study, we conclude that, the post dated pregnancy can be considered as a high risk factor from the point of view of fetal outcome as there is more fetal morbidity. Fetal distress is the most common indication of caesarean section in both, spontaneous as well as induced labour in postdated pregnancy

Considering the above mentioned reasons of maternal and perinatal outcome, most of the patients will be benefited from more aggressive induction of labour after expected date of delivery.

Management of pregnancy beyond 40 weeks upto 42 weeks remains controversial. Current research demonstrated that is increased in the risk for both mother and babies absolute risk of adverse event associated with gestational age. NICU admission one of the risk factors attributed to prolonged pregnancy.

In this complex clinical condition we should identify the fetus at risk and to institute an appropriate management following adequate counselling of patient. So that when any pregnant women who comes in antenatal period or pre conception period should be counselled regarding the importance and necessity of accurate LMP so that we can reduce post dated pregnancy and its complications

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