

**Original article:**

## **Study of the risk factors and etiological factors associated with the prolonged pregnancies**

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### **Abstract:**

**Introduction:** At approximately 43 weeks her water broke and labour soon began spontaneously. Contractions were weak and the first stage of labour lasted more than 50 hours. Gradually, the fluid became meconium stained.

**Materials and Methods:** The study was carried out in Rural Hospital , Loni in the Department of Obstetrics and Gynaecology, Pravara Rural Hospital, Loni. 150 patients who cross 280 days i.e. 40 weeks confinement were included in this study.

**Results:** In our study 150 patients are of different age groups. Maximum patients are between age group 21 to 25 years.

**Conclusion:** In our present study we found the incidence of post dated pregnancies to be 14.54%. It is higher than the other studies because of we followed the routine protocol of induction of the patients at 41 weeks. 40% of the post dated patients in studied time period are between 40 weeks 1 day to 40 weeks 6 days i.e Group I.

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### **Introduction:**

At approximately 43 weeks her water broke and labour soon began spontaneously. Contractions were weak and the first stage of labour lasted more than 50 hours. Gradually, the fluid became meconium stained. After 24 hours in the second stage of labour and after five hours of active pushing, she spontaneously delivered a stillborn boy. The baby appeared to have been dead for several hours. During the third stage, placenta was retained, and she had a post-partum haemorrhage from uterine atony. Princess Charlotte died approximately six hours after delivery. Three months later her obstetrician, Dr. Croft, committed suicide, unable to bear the burden of the responsibility for the death of the British heir to the throne. As this event resulted in the death of an infant, the mother and her physician, it has historically been referred to

as the "*The Triple Obstetric Tragedy*." Princess Charlotte Augusta of Wales<sup>1</sup>.

Duration of pregnancy varies with ethnicity. The average length of pregnancy is found to be about 5 days shorter in black populations than in white populations. This implicates that the post-term complications and postmaturity syndrome may occur at a shorter gestational age in black populations. The results suggested that 23-30% of post-term pregnancies were due to genetic factors, and that only maternal genes influenced pregnancy length. Some congenital anomalies (anencephaly, trisomies 16 and 18) are associated with post-term delivery. This also applies to conditions that alter the fetal adrenal-pituitary axis (absence of the fetal pituitary or fetal adrenal hypoplasia). The explanation may be that these

conditions lack the high concentrations of estrogen seen in normal pregnancies.<sup>2,3</sup>

**Materials and Methods:**

The study was carried out in Rural Hospital , Loni in the Department of Obstetrics and Gynaecology, Pravara Rural Hospital,Loni.150 patients who cross 280 days i.e. 40 weeks confinement were included in this study.

Only those patients who were sure of their date of last menstrual period and who had done ultrasound at least once either in 1<sup>st</sup> trimester or in 2<sup>nd</sup> trimester were included in this study group.

The postdated patients were divided into 3 groups:

Group I : From 40 wks 1 day to 40 wks 6.

Group II : From 41 wks to 41 wks 6.

Group III : Beyond 42 weeks.

Amongst 150 patients, who were hospitalized with diagnosis of postdatism.

- ❖ 50 were from group I, 50 were from group II and 50 from group III.

- ❖ 37 patients have undergone expectant management
- ❖ 33 patients induced with sweeping and stretching
- ❖ 26 patients induced with oxytocin
- ❖ 20 induced with misoprost
- ❖ 6 induced with cerviprime
- ❖ 28 patients directly taken for section and not induced.

Complete clinical assessment of the post-dated patients was done including measurement of weight, fundal height and abdominal girth in cms. Daily fetal movement count records were kept by the patients who were admitted at term and who became post dated waiting to go into spontaneous labour. Ultrasonographic evaluation for assessing the fetal maturity was done in all post date patients .Whenever possible single BPD measurement along with Manning score and AFI were recorded. In a few patients who came late in labour USG could not be done.

**Results:**

In our study 150 patients are of different age groups. Maximum patients are between age group 21 to 25 years.

**Table no:1Age wise distribution of Postdatedpregnacies**

Age in Yrs	Group I	Group II	Group III	Total
15-20	12	10	14	36(24%)
21-25	34	32	28	94(63%)
26-30	4	5	6	15(10%)
31-35	0	2	3	5(3%)

1. It has been observed that incidence of postdated pregnancy is much higher in primigravidas.

**Table :2Gravida Score and no. of postdated pregnancy**

Gravida Score	No. Of Patients
Primi	70(46.6%)
G2	40(26.6%)
G3	25(16.6%)
Multi	15(10%)

1. Amniotic fluid Index was observed in Group I,II and III.

**Table:3Amniotic Fluid Index**

AFI	0-5	≥6
Group I	7(14%)	43(86%)
Group II	8(16%)	42(84%)
Group III	20(40%)	30(60%)

By applying chi square test, ( $\chi^2 = 11.7$ ,  $p = 0.001$ ,  $d.f = 2$ ) shows highly significant relation between groups and amniotic fluid index.

**Table:4Colour of Liquor at at the time of delivery**

Colour of Liquor	Clear	Meconium
Group I	43(86%)	7(14%)
Group II	36(72%)	14(28%)
Group III	30(60%)	20(40%)

By applying chi square test ( $\chi^2=8.53$  ,  $p=0.014$ ,  $d.f=2$ ) There is significant relation between groups and colour of liquor.

**Discussion:**

Incidence of post date pregnancy: There is wide variation in the incidence of post dated pregnancy quoted by different authors. The published incidence varies between 2.7% to 14% Beischer<sup>4</sup>(1969). Reported the incidence of 7 to 14% when pregnancy duration was beyond 42 weeks, 2 to 7 % beyond 43 weeks and 1% to 1.5% when it is beyond 44 weeks.

Thakur<sup>5</sup>(1985) quoted the incidence to be 15.2% while Boisselier<sup>6</sup>(1995) founded to be 10% beyond 42 weeks. Sulik<sup>7</sup>(1994) found the same incidence. Vaidya<sup>8</sup> (1985) reported the incidence of 8 to 14% while Lahiri<sup>9</sup> found it to be 11.7%. In our present study we found the incidence of post dated pregnancies to be 14.54%. It is higher than the other studies because of we followed the routine protocol

of induction of the patients at 41 weeks. 40% of the post dated patients in studied time period are between 40 weeks 1 day to 40 weeks 6 days i.e Group I. We have studied 50 cases of gestational age between 40 wks 1 day to 40 wks 6 day i.e. Group I , 50 cases of gestational age between 41 wks to 41 wks 6 days i.e. Group II, and 50 cases more than 42 wks i.e. Group III. Aaidya<sup>9</sup> reported pregnancy induced hypertension in 4% and past history of post datism in 4% of patients of prolonged pregnancy. Botti<sup>10</sup> reported increased incidence of PIH in post dated pregnancies.

**Conclusion:**

In our present study we found the incidence of post dated pregnancies to be 14.54%. It is higher than the other studies because of we followed the routine protocol of induction of the patients at 41 weeks. 40% of the post dated patients in studied time period are between 40 weeks 1 day to 40 weeks 6 days i.e Group I.

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