

## Original Article

# Fetal Outcome Of Postdated Pregnancy: A Study of 100 Cases In CMH Dhaka

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Lt. Col. Dr. Kaoser Jahan<sup>1</sup>

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## ABSTRACT

**Introduction:** Postdate, post-term, postmaturity, and prolonged pregnancy are accepted terms by WHO and the International Federation of Gynecology and Obstetrics to describe pregnancy beyond dates (expected date of delivery). As per WHO, post-term pregnancy (PTP) is defined as a pregnancy that persists beyond 294 days or 42 weeks of gestation. Post-term pregnancy is often a significant risk factor for various adverse maternal and neonatal outcomes. The present study was conducted to observe the fetal outcomes of 100 postdated pregnancy cases. **Aim of the study:** The aim of the study was to observe fetal outcomes of postdated pregnancy cases. **Methods:** This cross-sectional prospective study was conducted at the Department of Gynecology & Obstetrics, Combined Military Hospital (CMH), Dhaka, Bangladesh. The study duration was one year, from January 2009 to December 2009, and the study was conducted with a total of 100 cases.

**Result:** Most of the respondents (92%) belonged to the age group of 18-29 years. 64% were multigravida followed by 36% primi gravida. Most of the respondents were found between >40-42 weeks. 90% of respondents had undergone regular checkups as antenatal care. 56 (56%) had induced type of labor followed by the spontaneous type 44 (44%) of onset of labor. Out of 100 respondents, most of the respondents 54 (54%) mode of delivery was described as NVD followed by cs 44 (44%). **Conclusion:** The study observed a high occurrence of multigravida patients among postdated pregnancy cases, which was different from other similar studies. Post-term pregnancy had a high incidence of low fetal movement as maternal complications alongside the postdated pregnancy, and birth weight of >2.5 kg was observed in the majority of neonates. The present study had a very low rate of neonatal deaths, but fetal distress was the most common complication among neonates.

**Keywords:** Postdated, Post-term, Fetal, Gestational, Fetal Outcome

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1. Department of Obstetrics and Gynaecology, Combined Military Hospital, Dhaka, Bangladesh

## INTRODUCTION

The typical length of a pregnancy is 37 to 42 weeks, sometimes known as "term." Post-term pregnancy is defined as a pregnancy that lasts longer than 42 weeks (294 days) from the first day of the last menstrual cycle. Pregnancies that are past term account for up to 10% of all pregnancies.<sup>[1]</sup> The words protracted pregnancy postdates, and postdates are all used interchangeably to refer to the same thing. The words "postdate pregnancy" and "prolonged pregnancy" are vague and should be avoided.<sup>[2]</sup> In obstetric treatment, a post-term or postdated pregnancy is a high-risk condition because the risk of perinatal death and morbidity increases dramatically as the pregnancy progresses beyond the term.<sup>[3]-[5]</sup> The risks of fetal, neonatal, and maternal problems have historically been overestimated in this situation. Prolonged pregnancy affects 3-14 % of all pregnancies, and the rate varies depending on the method of determining gestational age. When the diagnosis is based only on menstrual history, the incidence is 7.5 %; however, when the diagnosis is based on early USG, the incidence is 2.6 percent, and when both are evaluated combined, the incidence is 1.1 percent.<sup>[6]</sup> The rate of post-term pregnancy is also influenced by the proportion of women who have pregnancy problems and the frequency of spontaneous preterm labor. The relationship between ethnicity and total pregnancy length is not well understood.<sup>[7],[8]</sup> Incorrect date is the most prevalent cause of protracted pregnancies, however, the exact reason for post-term pregnancy is often unclear. When traditional clinical criteria are used to predict the expected delivery date (EDD), the gestational age is overestimated, which raises the risk of post-term pregnancy.<sup>[9]-[12]</sup> The hazards of post-term pregnancy are higher than previously thought, owing to the fact that past research on the subject was published before the widespread use of ultrasonography, making it hard to precisely assess the harm done to the

children. At 42 weeks of pregnancy, the perinatal mortality rate, which includes stillbirths and early neonatal fatalities, is twice as high as it is at term. At 43 weeks, this grows to 4-fold, and at 44 weeks, it climbs to 5-7-fold.<sup>[13]-[15]</sup> Post-term pregnancies and pregnancies that last longer than 41 weeks have a higher rate of fetal morbidity. Meconium passage, meconium aspiration syndrome, macrosomia, and dysmaturity are all examples of this. Poor umbilical cord pH levels (neonatal acidaemia), low 5-minute Apgar scores, neonatal encephalopathy, and neonatal mortality in the first year of life are all risk factors for post-term pregnancy.<sup>[14]-[18]</sup>

## OBJECTIVE

### General Objective

- To observe the fetal outcome of postdated pregnancy case
- To observe the fetal complications of postdated pregnancy cases

## METHODS

This cross-sectional prospective study was conducted at the Department of Gynecology & Obstetrics, Combined Military Hospital (CMH), Dhaka, Bangladesh. The study duration was one year, from January 2009 to December 2009, and the study was conducted with a total of 100 cases. A purposive sampling technique was conducted to select the 100 participants among those who were admitted to the hospital during the study period and had exceeded their expected delivery date (EDD). Informed written consent was obtained from the participants after following the other exclusion and inclusion criteria. Ethical approval was also obtained from the ethical review committee of the study hospital. The data were collected through a face-to-face interview by a

structured questionnaire. All the patients were under regular follow-up. Their onset of labor pain, whether spontaneous or induced, mode of delivery, and the condition of the baby were assessed. Then all the relevant data was collected and recorded from their admission until discharge. Descriptive and statistical methods were used to analyze the data.

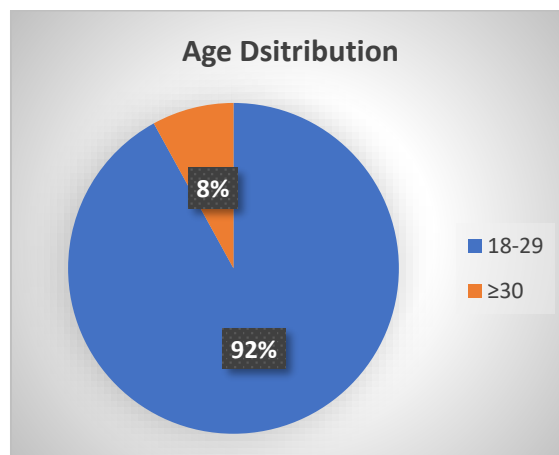
### Inclusion Criteria

- Uncomplicated singleton pregnancies exceeding EDD.
- Regular menstrual cycle
- Certain regular menstrual or ultrasonic dating before 20 weeks of gestation was included in the study.

### Exclusion Criteria

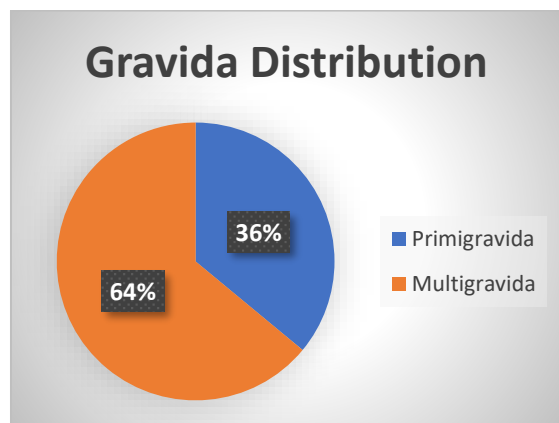
- Patients conceived during the locational amenorrhea period.
- Patient having irregular menstruation
- Patients having medical disorders like hypertension, renal disease, etc.
- Patients with obstetric complications like a history of antepartum hemorrhage, bad obstetric history, intrauterine growth restriction(IUGR), any congenital anomalies, malpresentation, cephalopelvic disproportion, previous caesarian section, etc.
- Unable to answer the criteria question.

## RESULTS



**Figure 1:** Age distribution of the participants (n=100)

Figure 1 showed that most of the respondents (92%) belonged to the age group of 18-29 years.



**Figure 2:** Gravidity distribution of the participants (n=100)

Figure 2 revealed most of the respondents (64%) as multigravida followed by primigravida (36%).

**Table 1:** Distribution of the participants by the maternal characteristics (n=100)

Characteristics	Frequency	Percentage
<b>Duration of Pregnancy (In Weeks)</b>		
>40-42	93	93%
>42-43	6	6%
>43	1	1%
<b>Antenatal Check-Up</b>		
Regular check-up	90	90%
Irregular checkup	8	8%
No check-up	2	2%
<b>Onset of labor</b>		
Spontaneous	44	44%
Induced	56	56%
<b>Mode of Delivery</b>		
NVD	54	54%
CS	44	44%
Ventouses	2	2%

Table 1 showed the duration of pregnancy among most of the respondents was found between >40-42 weeks. Among the 100 respondents, 90(90%) respondents were used to going for regular checkups as antenatal care. It was observed that most of the respondents 56 (56%) had induced type of labor followed by the spontaneous type 44 (44%) of onset of labor. Out of the 100 respondents, 54% had a mode of delivery as NVD, followed by CS 44 (44%).

**Table 2:** Distribution of participants by maternal complications (n=100)

Complications	Frequency	Percentage
Only post term pregnancy	60	60%
Less Fetal movement	28	28%
Rupture of the membrane	6	6%
Oligohydramnios	6	6%

In table 5 it had been found that the post-term pregnancy was narrated as one of the most common maternal complications by 60(60%) respondents whereas the less fetal movement was found in 28 (28%) respondents as a maternal complication.

**Table 3:** Fetal outcomes of the participants (n=100)

Variables	Frequency	Percentage
<b>Sex of baby</b>		
Female	52	52%
Male	48	48%
<b>Birth weight in kg</b>		
<2.5	4	4%
2.5-3.49	69	69%
3.5-3.99	24	24%
>4	3	3%
<b>APGAR Score(N=100)</b>		
<6	10	10%
6-7	16	16%
>7	74	74%

Table 6 showed that, out of 100 respondents female & male were found 52 (52%) & 48 (48%) respectively, birth weight was revealed 2.5-3.49 kg by 69 (69%) respondents followed by 3.5-3.99 kg birth weight by 24 (24%) respondents, Apgar's Score1 was narrated >7 by 74 (74%) respondents.

**Table 4:** Distribution of the participants by fetal complications (n=100)

Fetal complication	Frequency	Percentage
No complication	75	75%
Fetal distress	15	15%
Birth asphyxia	8	8%
Stillbirth	0	0
Neonatal death	2	2%

In table 7 it had been found that among the respondents most of them had no fetal complications mentioned by 75 (75%) respondents followed by fetal distress narrated by 15 (15%) respondents.

## DISCUSSION

The present study was conducted with a total of 100 cases of postdated pregnancies who were admitted to the study hospital during the study period. It was observed that the majority of the study participants were under 30 years of age, with only 8% who were 30 years or older. This was similar to the findings of another study.<sup>[19]</sup> Similar studies regarding postdated pregnancy cases observed that the risk of the post-term study had an increased along with maternal age, but in many cases, most of the study subjects were over 30 years of age.<sup>[20]</sup> The prevalence of multigravida patients was higher among the postdated pregnancy cases of our study, which was contradictory to the findings of various other studies.<sup>[19],[21],[22]</sup> No cause could be determined regarding the difference in the prevalence of primi and multigravida patients. 93% of the participants had a gestational age of >40-42 weeks, while 6% had a gestational age of >42-43 weeks, and 1 patient had over 43 weeks of gestational age. This high gestational period at the time of admission might be due to a lack of education, ignorance, and unawareness about the complication of prolonged pregnancy, which could be overcome by proper antenatal care and health education. This led to 44% of the participants having spontaneous delivery, while 56% had to undergo induced delivery. The mode of delivery was a cesarean section for 44% of cases, normal vaginal delivery for 54%, and 2 patients had ventouse or assisted delivery. The rate of cesarean section deliveries was higher in our study compared to some other pieces of literature.<sup>[23],[24]</sup> Contact with medical personnel during the gestational period is a significant contributor to a better

pregnancy outcome. In the current study, 90% of the respondents visited healthy personnel regularly for antenatal checkups possibly due to free medical services in Defense services. Lack of regular antenatal care may be a risk factor for prolonged pregnancy as shown in other publications. Along with the complaints of having labor pain and significant duration of gestation, subjects presented with some other complaints that might be significant while assessing the outcome of pregnancy. 40% had presented with such additional complaints. Among them, 28% presented with less fetal movement, 6% ruptured membrane, and 6% presented with oligohydramnios. Different studies showed that liquor volume is significantly lowered in prolonged pregnancy which causes cord compression and subsequently fetal distress and less fetal movement. This statement was supported by the study of Rahima et al.<sup>[25]</sup> The high cesarean section rate of the present study was also influenced by the necessity of reducing fetal risks. The fetal outcome was monitored by using an APGAR score just 1 min-5 min after delivery. A healthy APGAR score of >7 was observed in 74% of the cases. Among the neonates, 69% were between the age of 2.5-3.49 kg, while another 24% had weighed between 3.5-3.99 kg, and 3 of the neonates weighed 4 kg or kg or higher. High neonatal weight is a common occurrence in postdated pregnancies. In regards to fetal complications, 75% had no fetal complications, 15% had fetal distress syndrome, 8% had birth asphyxia and 2 cases of neonatal death were observed in our study. Fetal distress had the highest prevalence among neonatal complications in the study of Bhriegu et al. as well.<sup>[19]</sup>

### Limitations of The Study

The study was conducted in a single hospital with a small sample size. So, the results may not represent the whole community.

## CONCLUSION

The study observed a high occurrence of multigravida patients among postdated pregnancy cases, which was different from other similar studies. Post-term pregnancy had a high incidence of low fetal movement as maternal complications alongside the postdated pregnancy, and birth weight of >2.5 kg was observed in the majority of neonates. The present study had a very low rate of neonatal deaths, but fetal distress was the most common complication among neonates.

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**Conflict of interest:** None declared

**Ethical approval:** The study was approved by the Institutional Ethics Committee

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