

# Management of Post-Term Pregnancy at The Provincial Reference Hospital of Jason Sendwe Lubumbashi “An observational study”

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## Abstract

**Objective:** to study the physiopathological, clinical and therapeutic aspects of post-term pregnancies at the gynecology and obstetrics unit of the provincial general hospital of Jason Sendwe

**Materials and Method:** it concerned a retrospective observational study with a comprehensive convenient sampling carried out within a period of 3 years going from January 2018 to December 2021. Inclusion criteria to the study concerned registered pregnant women with a gestational age greater than or equal to 42 weeks of amenorrhea with a complete exploitable partogram. Collected data were recorded and analyzed by Microsoft office 2016 and Epi Info 7.2.0.1.

**Results:** during the study period, 61 cases of post-term pregnancies were registered on a total of 2100 childbirths. Yet, only 54 cases responded to our inclusion criteria of which the results follows. The mean age of our sample study was 27.04 years. The age range of [21-24] and [31-35] years mainly represented 25.93% both. 68.52% of the pregnant women were not followed-up for their pregnancies. Most post-terms were observed in the population of multigestes/multiparous (38.89%/29.63%) and primigestes/primiparous (33.33%/27.78%) respectively. Among the sample study, 48.15% underwent an artificial induction of labor. We recorded 12.96% of neonatal death among our population sample during study period.

**Conclusion:** A relatively increased neonatal mortality of 12.96% was recorded in the post term gestations with 16.66% of the new born admitted to intensive care at birth, evidence that gestational advanced age is a risk factor for perinatal morbidity and mortality increases.

**Keywords:** post-term; pregnancy; management; jason sendwe

## Introduction

A post-term pregnancy is one that extends beyond 42 weeks of amenorrhea. That is 294 days from the first day of the last menstrual period [1, 2]. Besides, this theoretical definition is imprecise. Two principal variable factors have been identified during its outcome: early ultrasound dating of pregnancies and the evolution of induction practices [3]. Moreover, in accurately dated pregnancies, the cause of post term

pregnancy is usually unknown. The reported frequency of post term pregnancy is approximately 7% [14]. Yet, the incidence of post term pregnancies is greatly heterogeneous in Europe and in the USA and varies between 0.5% to 10% according to countries and states. Prolonged pregnancies concerns nearly 15% of pregnant women in France whereas, late term pregnancies concerns only 1%. In Europe, the group of Scandinavian countries brands with elevated late term pregnancies

ranging between 5 and 7% [1]. In Mali (Africa), the frequency of prolonged pregnancies according to a study carried out in Bamako in 2015 at the health center of the municipality II of the district of Bamako varied between 3.63% and 4.72% [4]. At the University of Lubumbashi's clinical hospital, the frequency of prolonged pregnancies evaluated in 2001 was at 3.76% against 50.99% of normal term and 12.28% prematurity [6]. Post term pregnancies constitutes a risk factor for both the fetus and the mother. Caesarian sections, postpartum hemorrhage, uterine rupture, genital infections and perineum lesions are some of the maternal complications whereas, stillbirth or neonatal death, large body size, fetal dysmaturity and meconium aspiration are some of the known fetal risks [4]. Inversely, insufficient data and studies concerning secondary complications of labor induction in case of prolonged pregnancy limits our conclusions [1]. Hence, limited in our understanding of whether the practice of labor induction during post term pregnancies is associated or not to increased risks of maternal morbidity and mortality in our context. The aim of this study was to deepen our understanding and knowledge on the adequate management of post term pregnancies whenever the diagnosis is set.

## Materials And Method

The study carried out was a retrospective observational study undergone from January 1<sup>st</sup> 2018 to December 31<sup>st</sup> 2020 either a period of 3 years. We proceeded by an exhaustive convenient sampling of our participants to the study that targeted pregnant women admitted during study period at the provincial reference hospital of Jason Sendwe. The study sample concerned all pregnant women admitted in the unit service of gynecology for childbirth.

Inclusion criteria: were included to the study all registered pregnant women with a gestational age more than or equal to 42 weeks of amenorrhea [1, 2] admitted at the Jason Sendwe hospital for childbirth with a complete exploitable partogram.

Exclusion criteria: the files of the sample population with incomplete or non-exploitable partogram.

Protocol: we used a counting premade form to collect data from the registers of childbirth in the maternity of the gynecology and obstetrics unit. Studied collected variables concerned mainly sociodemographic, clinical, therapeutic and evolutive characteristics. Collected data were recorded and analyzed respectively by the Microsoft office 2016 and Epi Info 7.2.0.1 soft wares that enabled us to generate distribution tables, frequencies and graphs. The results obtained are presented in tables and figures below.

## Results

### Frequency of post term cases

The provincial reference hospital of Jason Sendwe registered 2100 childbirth during study period among which 61 of them where post term cases. Yet seven files were excluded from study because incomplete and non-exploitable. The description of sociodemographic, clinical, therapeutic and evolutive characteristics focused on the remaining 54 retained files either a frequency of 2.57% of post term cases.

### Sociodemographic characteristics

The mean age of the sample was 27.04 years with a great representation of the age range of [21-24] and [31-35] years giving a frequency of 25.93% respectively. The most represented profession was that of housewife with 50% against 7.41% civil servant representation. On the other hand, 68.52% of the newborn babies were of the male sex.

<b>Table 1: Sociodemographic Characteristics of Pregnant Women and Sex Distribution of New Born</b>		
	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Age range (years)</b>		
<20	5	9.25
21-24	14	<b>25.93</b>
25-30	12	22.22
31-35	14	<b>25.93</b>
≥36	9	16.67
<b>Profession</b>		
Housewife	<b>27</b>	<b>50</b>
Tradeswoman	14	25.92
Student	5	9.26
Civil servant	4	7.41
Others	4	7.41
<b>New born sex</b>		
Male	<b>37</b>	<b>68.52</b>
Female	17	31.48

### Clinical characteristics

Among the different modes of admission, pregnant women with direct admission from the reception of the hospital represented 77.77% of the overall registered sample. Only 11.11% of the pregnant women realized more than 4 prenatal consultations against 68.51% of the sample who never followed a prenatal consultation throughout their gestational period.

A number of 47 pregnant women knew their date of last menstrual period either 87.03%. Besides, 22.23% of the sample population had medical past history. We equally noticed that, multigravida were mainly represented with a frequency of 38.88% followed by primigravida with 33.33%. Moreover, differences among rates exist, 29.62% multiparous and 27.77% primiparous with prolonged pregnancies. On the other hand, the Bishop score was in favor of labor induction at 51.8%.

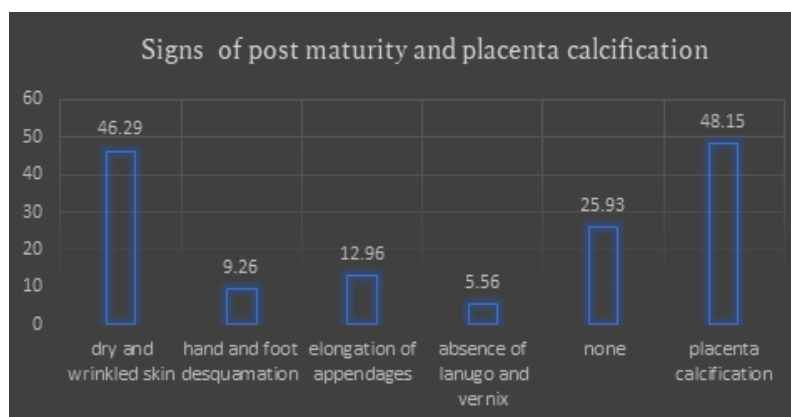
	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Form of admission</b>		
Internal	<b>42</b>	<b>77.78</b>
External	12	22.22

Frequency of prenatal consultation		
<4 times	11	20,37
≥4 times	6	11,11
Not followed	37	68,52
Date of last menstrual period		
Known	47	87,04
Unknown	7	12,96
Gravida		
Primigravida	18	33,33
Paucigravida	11	20,37
Multigravida	21	38,89
Great multigravida	4	7,41
Parity		
Nulliparous	10	18,52
Primiparous	15	27,78
Pauciparous	8	14,81
Multiparous	16	29,63
Great multiparous	5	9,26
Bishop Score		
[1-4]	23	42,59
[5-6]	3	5,56
≥7	28	51,85

**Table 2:** Clinical Characteristics of The Pregnant Women

### Signs of post maturity and placenta calcification

Mainly all the recorded signs of post maturity were represented by a dry and wrinkled skin followed by elongation of appendages with 46.29% and 12.96% respectively. The cases of placenta calcification represented 48.15%.



**Figure 1:** Distribution Following the Signs of Post Maturity and Placenta Calcification

### Therapeutic characteristics

Mode of entry into labor was both artificial and spontaneous. Artificial induction of labor was realized in the group of 23 women with a frequency of 42.5% against a spontaneous labor process in 51.8% of the sample.

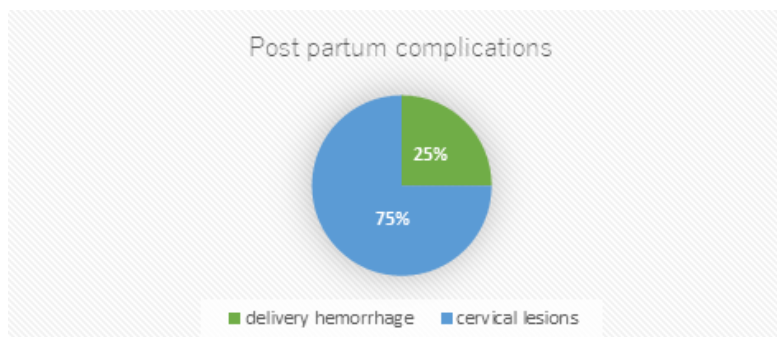
Means used mostly for labor induction was oxytocin infusion in 69.5% of the cases. Vaginal delivery both for spontaneous and artificial induction was observed at 90.74%.

	Frequency (n)	Percentage (%)
Entry way of labor		
Spontaneous	23	42,59
Induced	26	48,15
Caesarian	5	9,26
Means used for labor induction		
Prostaglandins drugs	8	30,77
Oxytocin infusion	18	69,23

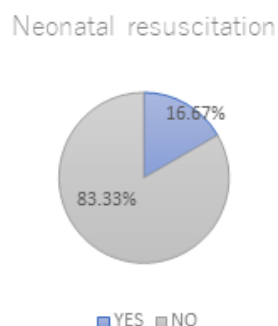
Delivery way		
Vaginal	49	90.74
Caesarian	5	9.26

**Table 3 :** Therapeutic Characteristics**Evolutive characteristics**

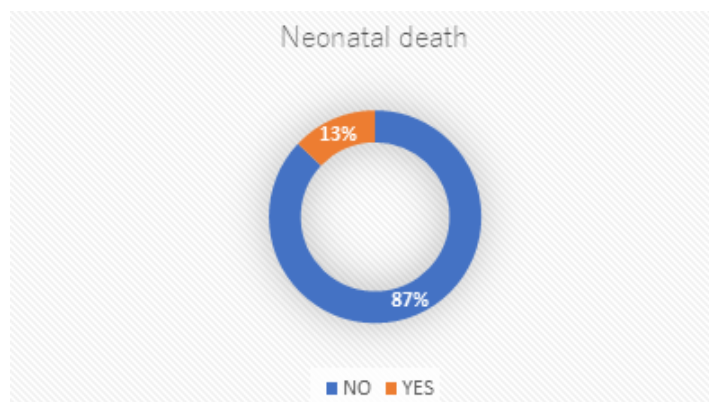
Postpartum complications were dominated by hemorrhagic delivery (75%) followed by cervical lesions (25%).

**Figure 2:** Distribution Following Post-Partum Complications

Neonatal resuscitation was observed in 16.67% of the overall birth deliveries.

**Figure 3:** Distribution Following Neonatal Resuscitation

Study outcome recorded 12.96% of neonatal death amongst which all of the neonatal death concerned the newborns admitted at the intensive care unit, either 77.78% of the admissions.

**Figure 4:** Distribution of Neonatal Death**Discussion**

On a total of 2100 births during study period, 54 cases of post term pregnancies were recorded with a frequency of 2.57%. This frequency is found within the intervals of the literature that varies between 0.5 and 10% in Europe and in the USA [3]. Besides, the frequency observed

during this study was less than that obtained by Moussa tangara [4] in 2015 in a study carried out in Bamako where the frequency obtained varied between 3.63% and 4.72%. The low level of instruction of the sample population (50%) may probably be a cause to this reduced rate of prenatal consultations (68.51%) and the ignorance of the date of last menstrual period which is an important element of gestational dating. On

the other hand, the increase rate of corona virus pandemic from 2019 to 2020 with lockdown states may probably explain this reduced frequency of participation.

For Beisher [7], there exist a conversely proportional relationship between the mother age and the incidence of prolonged pregnancies. Mary E. Hannah [17] observed an inverse correlation of the last in a similar study. Pierre et al. [5] concluded that maternal age doesn't influence the incidence of post term pregnancies. The age groups of 21 to 24 years and 31 to 35 years constituted 25.93% of the study sample respectively. Mohamed [12] obtained in a study a predominant age group of 20 to 30 years that correspond to the period of maximal genital activity. Obtained results from this study corroborate with those of Mohamed and confirms that the outcome of post term pregnancies is observed mainly during this age range of genital activities. It emerges from this study that, housewives were greatly represented with a frequency of 50%. These housewives for the most were illiterate without any knowledge of their late date of menstrual period added to the non-observance of prenatal consultation. Terzibachian and Benachi [15, 16] suggested that an elevated socioeconomic level may favor the prolongation of pregnancies due to a better rest observance. Yet, our results draws near to that of Moussa Tangara [4] who obtained 58% of housewives in his study and established a correlation with post term pregnancies.

More than half of the sample population either 68.51% didn't attended prenatal consultations. This may corroborate with prolonged pregnancies as indicated by Moussa Tangara [4] where he established in his study and obtained that 79% of the pregnant women with post term pregnancies did not attended any prenatal consultation. The bishop score was favorable for labor induction in 51.8% cases. Obtained result is less than that of Moussa Tangara (69.80%) and Bensaid et al. (91.40%) [4, 6]. Signs of post maturity that dominated the clinics were dry and wrinkled skin with 46.26%. Faisal Yousouf [8] and Moussa Tangara [4] equally observed in their respective studies correlations between post-term pregnancies associated to clinical signs of post maturity.

Artificial labor induction was realized in 42% of the cases, which is clearly greater than that obtained by Moussa Tangara [4] (32%). This may be justified by the fact that oxytocin infusion used in our study was not systematically associated to amniotomie.

Hemorrhagic delivery and soft tissue lesions were the only recorded complications in this study. We registered 3.7% cases of hemorrhagic deliverance. Obtained result is greater than that of Moussa Tangara [4] (0.8%) and Caughey et al. [13] (1.20%). We listed 11.11% of the women who gave birth with cervical lesions. Caughey et al. [13] equally observed in a study that enrolled 119, 254 women an increased frequency of cervical lesion associated with post term pregnancy complications.

We registered 12.96% of neonatal death which is greater than that of Faisal Yousouf [8] who worked in 2012 on a series of 74 pregnant women amongst which the frequency of neonatal death was 1% whereas Moussa Tangara [4] still recorded 0.8%. Furthermore, neonatal resuscitation was realized in 16.67% of the cases. We unfortunately in the course of our research did not found in our environment studies that compared clinical aspects in new born at term and new born at post term.

Limitations to the study was mainly due to the poor rudimentary system of data archiving which was not computerized as such we had to dig deep into the files for data information. Non exploitable files destroyed by the conservational conditions of the files equally limited the study.

## Conclusion

Study reveals that, most of the participants to the study were housewives (50%) amongst which the majority either 68.51% of them didn't underwent prenatal consultations. Bishop score was favorable for labor induction in 51.8%. Prostaglandins (30.76%) and oxytocin in infusion (69.5%) were used for labor induction in women with unfavorable cervixes. Maternal risks are mainly related to caesarian section due to increased number of macrosomes or fetal distress during the last month of pregnancy. The frequency of overall post caesarian complications was 14.81% and 16.66% of the new born were admitted after birth to intensive care unit. Among the intensive care unit admissions, 77.78% of neonatal death was recorded giving a relatively increased neonatal mortality of 12.96% in the post term gestations for the overall sample of study. Evidence that the management of newborns admitted at the intensive care unit and gestational advanced age is a risk factor for perinatal morbidity and mortality increases.

## References

1. Oms (2007). Classification statistique internationale des maladies et problèmes de santé connexes, 10e Edition, Genève (CH).
2. Merger. (1989). La souffrance fœtale, précis d'obstétrique 5<sup>e</sup> Edition, Masson. 211-229.
3. Collège National des Gynécologues et Obstétriciens Français (CNGOF) (2007). Protocoles en gynécologie et obstétrique ; Elsevier Masson.
4. Moussa Tangara. (2016). Grossesse prolongée au service de gynéco obstétrique du centre de santé de la commune II du district de Bamako. Thèse de Med. Bamako.
5. Pierre F., Kone M. (2000). Durée normale de la grossesse. Encycl. méd. Chir
6. Bensaid F., Hajouj S., Nabil S., Bennani I., Chiraibi C. (1996). Grossesse prolongée. Experience de la maternité des orangers. A propos de 283 cas. Rev. Fr. Gynecol. Obstet. 91:530-536.
7. Beisher, N.A et al. (2000). Les études de la grossesse prolongée. Américain journal of obstet and gynecol. 103:476-482.
8. Faisal Yousouf (2012). Les grossesses prolongées à propos de 74 cas au service de gynéco obstétrique II du centre hospitalier universitaire Hassan II de Fès thèse de méd. Fès, N°16612.
9. Olesen AW; Westergaard JG; Olesen J. (2015). Perinatal and maternal complication related to post term delivery, a national register-based study.
10. Lansac J., Berger C., Magnin G. (2013). Acceptation d'une épreuve du travail (examen obstétrical et surveillance de la grossesse). In : Obstétric, Collection pour le praticien. 4e édition : Masson, paris. 47.
11. Haute Autorité de Santé (HAS). (2015). Déclenchement artificiel du travail à partir de la 37<sup>e</sup> semaine d'aménorrhée.
12. Mohamed El Idriss. (2006). Dépassement de terme à propos de 335 cas au service de gynécologie obstétrique de la maternité meryem du CHU ibn rochd de Casablanca thèse de Med. Casablanca.
13. Caughey Ab. (2017). Second trimester ultrasound: the effect of pregnancy dating and perinatal outcomes. Am J Obstet gynecol. 198[703.1-5-703.5-6]. Validation of established dating formulae in a population of in vitro fertilized pregnancies randomized to early or late dating scan. Ultrasound obstet gynecol.
14. Mathew J Neff. (2004). Am Fam physician. 70(11):2221-2225.
15. Terzibachian J. (2013). Le dépassement de terme. Thèse de médecine Besancon N°107.

16. Benachi. (2010). Conduites pratiques en médecine fœtale, coordonné par, collection Pratique en gynécologie-obstétrique.
17. Mary E. Hannah et al. (1992). induction of labor as compared with serial antenatal monitoring in post-term pregnancy. A randomized controlled trial. N Engl J Med. 326:1587-1592.

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