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Problematic of the gestational weight disproportions on the pronostic of pregnancy in the city of Lubumbashi in R.D.Congo

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Abstract

In politic of the fight against maternal mortality, this study is initiated to promote the health of the mother and child. The study of the problem of food management remains our capital priority. The objective of this article aims to describe the problem of the disproportion of gestational weight on the prognosis of pregnancy in the city of Lubumbashi. This study is transversal descriptive used the documentary technique to form the basis of its information.

The principal results are as follows: hypertension: 11.1%;

premature: 9.5%; dysmatured: 4.7%; thromboembolie 3.1%; pre-eclampsia: 3.9%; gestational diabetes: 142 %; gestational obesity: 11.9%; prolonged pregnancy: 8.7 % and malnutrition on pregnancy: 7.1 %.

In conclusion, pregnant women are recruited to adhere to the good practice of eating habits during pregnancy and to give themselves the obligation to participate in all the sessions of the Natal Consultation from the beginning of pregnancy.

Keywords: Pregnancy, Diet, Variation in Gestational Weight, Diseases

1. Introduction

According to the WHO, pregnancy is the period that flows from design to the birth of the baby. It lasts about nine months. And any pregnant woman and their newborn should receive quality care throughout pregnancy, childbirth and the postnatal period [1]. In other words, pregnancy is the term used when a woman has a fetus growing in her uterus. Human pregnancy lasts around 40 weeks, or around 9 months, from the last period of menstruation until the child's birth [2].

From the beginning of the period of pregnancy until childbirth, the maternal organism is requested to know important changes which affect almost all its major functions (endocrine, metabolism, breathing, etc.), for Promote the development of the embryo, the fetus, as well as for predispositions to childbirth [3]. These medications associated with decrease or excess weight, increase the risks of complications for both the mother and for the newborn to see for the child [2].

In the fifth month of pregnancy, the future mother has very important morphological changes. Its silhouette changes and takes more and more weight. The imbalances in gestational weights constitute a materno -state health concern because they are the basis of several deaths and complications. They do not allow a good devel of the intrusive uterine, as during gestational obesity, undernutrition is maternal under nutrition for example [4].

In fact, obesity is a risk factor for maternal mortality after anesthesia. Added to this is an increase in infectious or respiratory postoperative complications in obese women [4]. Related to post-natal complications for women; Obesity issues during pregnancy on women's health are not limited to the prenatal period [5]. It has been reported that postpartum weight gain during pregnancy was more important in obese women, especially if obesity is combined with excessive weight gain during pregnancy [6].

In fact, even if on average their weight gain during pregnancy is less important than that of women with a normal BMI, compared to the latter obese women are more likely to experience greater weight than the recommendations of 'Institute of Medicine (Iom) [5]. Postpartum weight retention in addition to its harmful effects on subsequent pregnancies predisposed to cardiovascular and metabolic diseases in the long term [7]. Postpartum depression is positively correlated with the BMI of women [8].

Regarding complications for the fetus and the newborn; Maternal overweight is associated with anomalies in the development of the fetus and the health of the newborn. In this part we are only interested in the aspects of development and health of the fetus and the newborn linked to obesity which are best known in the literature [9]. The risks of abortion and fetal mortality; The obese woman has a risk increased by obstetric problems at the beginning of pregnancy [10].

In many epidemiological studies, some cases of fetal hypotrophies linked to a low energy ration are observed. This leads to a higher risk of fetal hypotrophy (birth weight less than 2.5 kg [11]. perinatal mortality is all the more important as the birth weight is low. This frequent situation in countries in the process of Development, in Africa, especially in women from disadvantaged backgrounds or poorly suited to nutritional needs during their pregnancy.

The WHO recommends pregnant women to start the Natal Consultation (CPN) in order to reduce the risk of any high variation in weight during pregnancy. The importance of the CPN is to control or do good nutritional follow-up by qualified personnel who will contribute to the prevention of fetal-maternal complications [12].

The WHO stresses that the rational control of maternal weight gain during pregnancy is a good tool for predicting short and long-term for the health of pregnant women and their fetus, for which not also newborns. (WHO, 2008), by the fact that it allows us to avoid harmful consequences for the health of the mother and the newborn [6].

In the health promotion policy of pregnant women that we are setting up this study in order to identify pathologies linked to gestational weight disproportions on the pregnancy of pregnancy in the city of Lubumbashi.

2. Study area and method

2.1 Study area

The study of problematic of gestational weight disproportions on pregnancy pregnancy is organized at Jason Sendwe hospital, located in the city of Lubumbashi. This study lasted two months, it started on February 04 on March 04, 2022. The Jason Sendwe hospital was taken as a representative sample of all Lubumbashi hospitals. Before starting this study, an authorization to consult the hospital archives was given by the director.

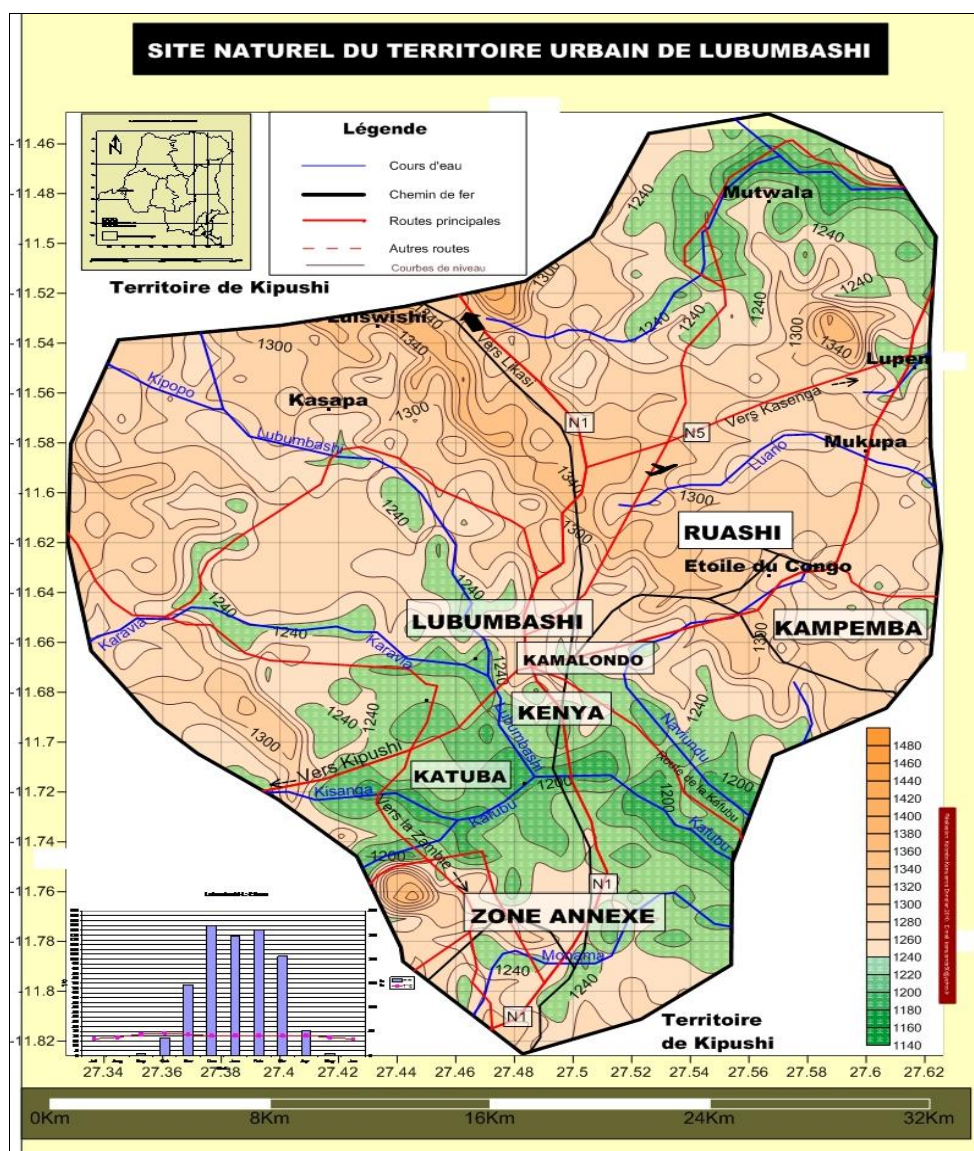


Fig 1: Location of Jason Sendwe Reference General Hospital in Lubumbashi Commune, Lubumbashi City

2.2 Methodology

We have used the technique of documentary collection of information accessing to this study. In the maternity consultation registers of the period from January 1 to December 30, 2021, we identified 830 cases of pregnant women. And on the basis of selections criteria, only women suffering with a gestational weight disorder interested this study. And these cases were 126 pregnant women.

2.3 Type of survey

Our study is descriptive transversal

2.4 Parameters of survey

Our study exploited the following variables:

- Age
- nutritional state
- Food habit
- Weight at the peri-conceptual period
- Newborn weight
- Consultation
- Gestational weight per quarter

2.5 Analysis and data processing

The following statistical formulas were used:

Percentage calculation (P)

$$P = n / N \times 100$$

n = number of observed cases

N = total number of cases

Legend:

n_i = observed frequency

N = total frequency

X = arithmetic mean

3. Results

From January 1 to December 31, 2021, we identified 830 cases of pregnant women who were consulted at Jason Sendwe hospital. According to the criteria of selections, 126 cases of pregnant women suffered from the disproportion of gestational weight, they represent 15.2 %.

Table 1: Distribution of pregnant women according to the selections criteria

Selections criteria	Effective	Pourcentage %
Yes	126	15.2
No	704	84.8
Total	830	100.0

Table 1 shows that 15.2 % of our sample positively meet the criterion of our study.

Table 2: Distribution of pregnant women according to age

Age (year)	ni	Pourcentage (%)
18 à 22	20	15.9
23 à 27	30	23.8
28 à 32	19	15.1
33 à 37	42	33.3
38 à 42	8	6.3
Plus de 42	7	5.6
Total	126	100.0

Table 2 shows that the majority of pregnant women are age between 33 and 37 years old, represented at 33.3% and the minority is 5.6%, are over 42 years old.

Table 3: Distribution of pregnant women according to the nutritional state (BMI)

BMI	Diagnostic	ni	Pourcentage (%)
18,5 à 24,9	Normal	41	32.5
25 à 29,9	Overweight	51	40.5
30 à 34,5	Obesity Stade I	14	11.1
35 à 39,9	Obesity Stade II	8	6.3
40 and up	Obesity Stade III	12	9.5
Total		126	100.0

Table 3 indicates that the majority of pregnant women with Overweight workforce. The minority are obesity Stade II, observed at 6.3% of the case.

Table 4: Distribution of pregnant women according to food habit

Food habit	ni	Pourcentage (%)
Three-star nutrients	26	20.6
Two-star nutrients	34	26.9
Nutrients type one	39	30.9
Type two nutrients	27	21.4
Total	126	100.0

Table 4 shows that the majority of pregnant women consume type 1 nutrients, 30.9 %, and few pregnant women feed on third star nutrients, only 20.6 %.

Table 5: Distribution of pregnant women according to peri-conceptual weight

Peri-conceptual weight (kg)	ni	Pourcentage (%)
55 to 64	62	49.2
65 to 74	21	16.7
75 to 84	18	14.3
85 to 94	7	5.6
95 to 104	13	10.3
Up of 104	5	3.9
Total	126	100.0

This Table 5 indicates that pregnant women at the weight between 55 to 64 kg were observed at 49.2% and those over 104 kg are minority and observed at 3.9%.

Table 6: Distribution of breastfeeding women according to the weight of Newborns

Weight of Newborns (en g)	ni	Pourcentage (%)
Inferior to 2500	24	19.0
2500 to 3400	52	41.3
3500 to 4400	7	5.6
4500 to 5500	43	34.1
Total	126	100.0

Table 6 points out that the majority of newborn weight between 2500 and 3400 g observed are observed in 41.3% of nursing women and the minority of newborns between 3500 and 4400g are observed in 5.6% of breastfeeding women. Note that 19% of these children are born with a weight of less than 2500g.

Table 7: Consequences of gestational weight disproportions on the pregnancy prognosis

Impact of dispos. weight	Ni	Pourcentage (%)
Hypertension	14	11.1
Gestational obesity	15	11.9
Prematurity	12	9.5
Dysmaturity	6	4.7
Thromboembolie	4	3.1
Pre-eclampsia	5	3.9
Gestational Diabetes	18	14.2
Prolonged pregnancy	11	8.7
Malnutrition on pregnancy	9	7.1
Foetopelviennne disproportionnate	14	11.1
Uncomplicated	17	13.5
Total	126	100.0

Table 7 ensures that the majority of nursing women suffered from gestational diabetes in the proportion of 14.2 %.

Fig 1 shows that 97 pregnant women went regularly to the Natal Consultation (CPN), equal to 76.9 %. And 29 pregnant women were irregular at CPN sessions, equal to 23.1 %.

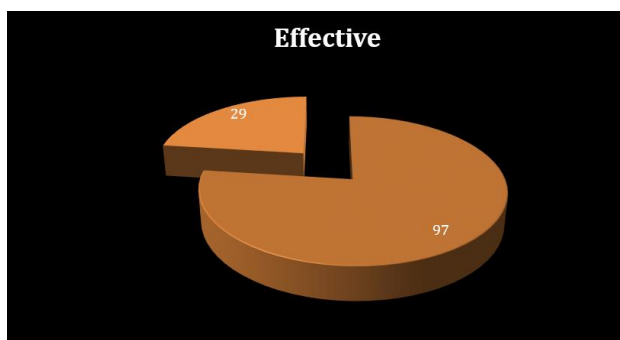


Fig 1: Distribution of pregnant women according to participation in the CPN

Table 8: Distribution of pregnant women depending on age at childbirth

Age at childbirth(by year)	ni	Pourcentage (%)
23 - 32	24	19.0
33 - 42	83	65.8
43 - 47	7	5.5
Total	126	100.0

Table 8 shows that 83 pregnant women gave birth in 2021 to 65.8 %. And only 5 % of women aged 43 to 47 years old gave birth.

4. Discussion

From the observation of pathologies resulting from the weight disproportion during pregnancy and presented in Table 7, we can retain following diseases:

- Hypertension reaches 11.1% of cases. Gravidic hypertension was generally seen in the meadows of pregnant women with blood pressure from 140/90 mmHg which appears during pregnancy, whose screening was done after 20 weeks of amenorrhoea, and some early cases (Before 20 weeks of amenorrhoea) were observed. High blood pressure is accompanied by a significant amount of protein in the urine (300 mg/24 hours or more) [8]. We classified pre-eclampsia. The latter can evolve towards lightning which is a serious

complication of pregnancy characterized by tonic-clonic crises (generalized crises of the epilepsy or other type). Until then, the only way to avoid maternal mortality in the case of lightning for which not interrupting engraving as in the case of the creek observed at Jonas Sendwe Hospital at 3.9% of cases.

- Gestational obesity with 11.9 % of cases. Obesity during pregnancy and other maternal risks are obvious by the fact that a very clear association between overweight and the obesity of the grooming woman causes obstetrics and perinatal problems such as the fetopelviennne disproportionnate to lead an episiotomy or a Cesarean [10]. Some studies evoke problems related to congenital malformations, malformations of the neural tube 2, the cardiac and gastrointestinal anomalies have been more frequently observed in children born of obese mothers even after adjustment on gestational diabetes [12].
- As for gestational diabetes; Our research shows that 14.2 % of mothers developed gestational diabetes. We understand this while; by the Pentoses ways; The phenomena based on the biochemistry of metabolic diseases are virtual.
- In relation to thromboembolic disorders; 3.1% of the cases observed in this study; Some mothers have already presented the occlusion of a vein (venous thrombosis) or an artery (arterial occlusion), which we translate into embolism when there is a movement of a blood clot (pulmonary embolism for example). The pregnancy is by dentition a prothrombotic state characterized by an increase in the plasma concentration of coagulant factors, a decrease in proteins S (intervening in finish, that is to say the dissolution of blood clots) and an inhibition of the fi brinolysis [8]. All these changes sometimes combined with certain other factors such as an advanced maternal age, high parity, pre-eclampsia and obesity, increase the risk of a thromose. According to Abdollahi *et al.* (2003); Obesity (BMI $\geq 30\text{kg/m}^2$) doubles the risk of thrombosis by an increase in coagulation factors but also the fi brinogen [13].
- The factors linked to an increased risk of cesarean in obese women are multiple. The largest risk of programmed cesarean section in obese women could at least partly be explained by the prevention of delivery complications linked to macrosomics, limitation of complications related to pre-eclampsia or lightning. In fact, overweight and obese women also have a larger frequency of instrumental childbirth (forceps, incision) and a higher risk of postpartum hemorrhages [12].
- Data from several cohorts suggest that obesity is an independent risk factor for spontaneous miscarriage. Furthermore, the risk of recurring false layers is also increased in obese women (Lashen *et al.*, 2004). In the same vein, intra uterine mortality (lifeless birth after 6 months of pregnancy) is more important in overweight and obese women [14].

5. Conclusion and suggestions

The problem of the weight disorctions on the pregnancy prognosis is the theme developed in this article. This study took place at the Janson Sendwe General Reference Hospital in the city of Lubumbashi in R.D. Congo.

The objective of this study is to identify the problem of weight disproportions on the pregnancy of pregnancy. And after having stripped all the archives, the consultation registers and the individual sheets of pregnant women, we led to the main results: hypertension: 11.1 %; Premature: 9.5 %; Dysmatured: 4.7 %; Thromboembolie 3.1 %; Pre-eclampsia: 3.9 %; Gestational diabetes: 14.2 %; Gestational obesity: 11.9 %; Prolonged pregnancy: 8.7 % and malnutrition on pregnancy: 7.1 %.

By the communication strategy for behavior change, we suggest:

- To health professionals: to educate pregnant women, outside the CPN sessions, to the practice of good eating habits during pregnancy.
- The population to join the practice of good eating habits during pregnancy and to make a duty to participate in the CPN sessions from the beginning of pregnancy.

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