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Research Article

Influence of Placenta Praevia on Low Birthweight at Health Center Sainte Bernadette of Katuba, Lubumbashi, Rdcongo

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Abstract: Placenta previa and low birth weight is a major public health problem. They affect both maternal and fetal health. They increase the neonatal morbidity and the mortality. We focus our study to determine the influence of placenta previa on low birth weight. An observational case-control study was conducted. The cases consisted of Newborn weighing at birth less than 2500grams. The controls were selected at the maternity ward and taken from all newborns weighing more than 2500grams. The research was conducted at the maternity center of ''Sainte Bernadette'' health center in the commune of Katuba in the city of Lubumbashi in the Democratic Republic of Congo. The data collection took place during a period of time from July 30 to August 30, 2017. In our study, we found that placenta previa had an effect on birth weight. The risk was increased (OR: 3.7 ; p = 0.048). The proportions found were 30% of low birthweight neonates and 52% of placenta previa cases. The marginal placenta previa had a strong association with low birth weight (p = 0.15, OR = 8.3 [1.4-49.9].) A large-scale and in-depth study will need to be conducted for more reliability.
Keywords: Placenta Prævia, Low birth weight.

INTRODUCTION

The low weight at birth is a major problem for the public health. Several factors are the base and compromise the vital pronostic. Taking in charge becomes difficult to organise in the context of a weak income and under equipment. It is the same case with the prævia placenta which has the same the impact both on the mother health and the fœtus one (Kabore, P. *et al.*, 2009). The prævia placenta is nowadays a true problem which is the base of the death even the mother death. Many factors are associated to a weak weight and the pronostic for this case seems to be obscure shadowy (Kramer, M.S. 1987). The mother factors are also accused among them the prævia placenta **(**Godding, V. 2004 ; Bwana Kangulu, I. & al. 2014; Bobossi, G. *et al.*, 2000; Letaief, M. *et al.*, 2001). We are focused our study on influence searching prævia placenta on the low birthweight. It is true that the placenta prævia twists the uteroplacenta swapping. The fœtus is risking suffering. So, to understake an epidemiologic study seems to be necessary. This study is assigned to determin the influence of prævia placenta on the low birthweight.

MATERIAL AND METHOD

The research has taken place at the matherhood of ''Sainte Bernadette'' health centre found in Katuba-Lubumbashi in Democratic Republic of Congo. The collecting data has tahen place from jully 30th, 2017. The study has been analytic, type case-control. The cases have constituted with birth having low birthweight less than 2500grams at birth **(**OMS. 2016**).** The control group have been selected at the motherhood and taken among all newborn infants who have weighed more than 2500grams. The exposition has been consisted of placenta prævia cases. After authorization from the ethics committee, we collected the registry data. As the collect of data concerning, we have used the documentary technique (consultation of variable mentioned on the file, partogram and on the registrer). According to the other information, one questionnaire has been formulated and addressed to the present delivered women in observation.

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We have selected fifty (50) newborn infants. With a compled sampling; we have selected fifty (50) newborn infants whose fifteen (15) were born with a weak weight. Moreover, we have also selected fifty (50) delivered women whose twenty six (26) do have palcenta praevia. The collected data were encoded and analysed by Epi Info7, version 7.1.3.3. The data analysis was univariate and bivariate as appropriate.

RESULTS

1.1 Collected data at newborn babies having low birthweight

Table1. Proportion of case with low birthweight

Birth weight	Size	Percentage
< 2500	15	30
≥ 2500	35	70
Total	50	100

The proportion of low birthweight has been of 30% among the population studied.

Table2. Distribution of newborn babies according to the sex

Sex	Size	Percentage
Male	5	30
Female	10	70
Total	15	100

Among the newborn babies having low birthweight, we have absorbed 30% of he-babies and 70% of shé-babies.

Table3. Distribution of newborn babies according to death rate

Mortality	Size	Percentage
Yes	1	6.6
No	14	93.4
Total	15	100

This table shows that 6.6% of newborn babies were died after delivery.

Tables4. Association between placenta praevia and birth weight

Placenta prævia	Birth weight	
	< 2500	>2500
Present	11	15
Absent	4	20
Total	15	35

OR = 3,7 $CI^{95\%}$ [0, 97 − 13, 8] p=0,048

The praevia placenta has got an effect on the birth weight and the risk has been multiplied by 3.7. However in this study, the confidence gap has been two much large and study becomes too weak (a low birthweight of the sample). 22% of newborn babies with low birthweight came from pregnancies with praevia placenta.

Table5. Influence of the type of praevia palcenta on the birth weight

Placenta praevia	< 2500	>2500	p-value	OR
Partial	5	10	0,22	OR = 2,5 [0,5 − 11,4]
Marginal	5	3	0,0125	OR = 8,3 [1,4 − 49,9]
Complete	1	2	0,485	OR = 2,5 [0,2 − 34,7]

The marginal prævia placenta has more influenced the birth weight.

1.1 Data collected from mothers informing on the placenta praevia

Table6. Proportion of case of praevia placenta

Placenta prævia	Size	Percentage
Present	26	52
Absent	24	48
Total	50	100

The proportion of the prævia placenta case was of 52%.

Table7. Proportion of mothers according to the age

Age (in years)	Size	Percentage
≤ 19	4	15
20 – 25	7	27
25 – 30	7	27
> 30	8	31
Total	26	100

This table shows that 15% of mothers were aged more than 19 years old, followed by 27% of mothers were also aged from 20 years old to 30years old and 31% were more than 30 years old.

Table8. Proportion of mothers according to the weight

Weight (in kilograms)	Size	Percentage
50 – 55	6	23
55 – 60	5	19
60 – 65	7	27
65 – 70	4	15
70 – 75	2	8
75 – 80	2	8
Total	26	100

This table shows that 58% of delivered women had from 50 to 55kilograms, 19% weighted from 55 to 60kilograms, 27% weighted from 60 to 65kilograms, 15% weighted from 65 to 70kilograms, 8% weighted from 701 to 75kilograms and 8% had a weight from 75 to 80kilograms.

Table9. Proportion of mothers according to their commune origin

Commune origin	Size	Percentage
Katuba	15	58
Kenya	3	11
Kamalondo	5	19
Lubumabshi	2	8
Kampemba	1	4
Total	26	100

This table shows that 58% of delivered xomen came from Katuba commune, 11% from Kenya commune, 19% came from Kamalondo commune, 8% came from Lubumbashi commune and 4% derived from Kampemba commune.

Table10. Proportion of mothers according to parity

Parity	Size	Percentage
Primiparae (1)	4	15,4
Pauciparae (2-3)	5	19,2
Multiparae **(>4)**	17	65,4
Total	26	100

This table shows that 15.4% of delivered women were primiparae ; whereas 19.2% of delivered women were pauciparae and 65.4% of delivered women were multiparae.

Table11. Proportion of mothers according to the gestation

Gravidas	Size	Percentage
Primigravida	1	4
Paucigravida	3	11
Multigravida	12	85
Total	26	100

This table shows that 4% of delivered women were primigravidas, 11% of delivered women were paucigravidas (2 or 3pregnacies) and 85% were multigravidas.

Table12. Proportion of mothers according to abortion

Abortion	Size	Percentage
Yes	8	31
No	18	69
Total	26	100

It is stipulated from this table that 31% of delivered women had already aborted at least once ; whereas 69% have not yet aborted.

Table13. Proportion of mothers according to the presentation of fœtus

Presentation	Size	Percentage
Cephalic	22	31
Breech	2	8
Transversal	2	8
Total	26	100

Through this table 13, 84% of delivered mothers with praevia placenta had cephalic presentation fetus followed with 8% of delivered women with breech presentation and 8% with transversal presentation.

Table14. Proportion of mothers according to the placenta weight

Placenta weight (in grams)	Size	Percentage
500 – 550	3	12
600 – 650	11	42
660 – 700	7	27
Plus de 700	5	19
Total	26	100

From this table 14, it is said that 12% of placenta weighted 500-600 grams ; 42% of placenta weighted 600-660grams ; 27% of placenta weighted 660-700grams and 19% for more than 700grams of weight.

DISCUSSION

This work was about a research of association between the low birthweight and the praevia placenta. In brief, we have observed a weak number of the population study concentrated in one place of research. The effect of sample is know on the result of research. Dupuy et Guillaume (Dupuy, A., & Guillaume, J.C. 2004) have written and said : ‘’in the research of weak powerfulness (in practice, a study from which the number of patient is less) the confidence interval is large’’. This is the case of our work.

The praevia placenta has got an impact on the birth weight, and the risk has increased (OR 3.7). But the attempt was negative because the space of faith was too much large. The effective was weak at least 50 newborn infants with this number, we come to realize that 15newborn babies had a low birthweight against 26 cases of prævia placenta. Finally, over results corroborate or confirm with thoise of Kabore, p. & *et al.,* (2009) who said that those children who born with praevia placenta have got a low birthweight and present a risk of death twice higher than those children born with a normal weight. For Mollinedo (Mollinedo, S., & Brutus, L. 2005) the risk of low birthweight and the risk of praevia placenta are increased when the placenta of the pregnant women is infected with the vivax plasmodium.

Among the types of praevia placenta, the marginal praevia placenta has got a strong association with a low birthweight (OR: 8.5 ; p=0..125). The proportion of low birthweight with praevia placenta were respectively 30% and 52% of cases. The proportions are highly ranked despite the weak sample. In the countries in process of development and under escapade, the highly frequence of weak weight is explained. As far as the praevia placenta is concerned ; the Vulgaris encyclopedia (online) mention that it exists at least, one praevia placenta for two hundred (200) pregnancies. This chiffer increases referring to the age of the pregnant mother. It is three times more frequent to thirty five (35) years old women than twenty five (25) years old ones for example. The previous one uses to present former uterine scars with multiple pregnancies (Encyclopedie, V. 2009).

Other researches were focused on factors of low birthweight. These factors are numerous such as : the age of pregnant women is inferior to 18 years old and superior to 35 years old ; prenatal consultations are not followed, the fact of being primiparae and premature, the fact of being frequently pregnant and the female sex of newbon babies are not associated factors of low birthweight (Kabore, P. *et al.,* 2009; Kramer, M.S. 1987; Amine, M. *et al.,* 2009). Moreover, other similar studies have added field works, the long distances going towards prenatal consultation (Kabore, P. *et al.,* 2009; Bobossi, G. *et al.,* 2005; & Letaief, M. *et al.,* 2001) and nitotism (Godding, V. 2004; Amine, M. *et al.,* 2009).

In our series, we have noticed that 31% were aged more than 30 years old and 54% were aged from 20 years old to 30 contrarly to Amine (Amine, M. *et al.,* 2009) who has noticed that the inferior mother age of 19 prese nted a risk factor of low birthweight.

The majority of investigated women I mean those who have got prævia placenta had less than 30kilograms and they were from Katuba commune (38%). The closeness tries to justify this result. Moreover, the neighbouring communes of Katuba such as Kamalondo (19%) and Kenya (11%) have abounded with more cases.

In our research, we have found that 65.38% of women who had praevia placenta were multiparae, followed by pauciparae with 19.23% and primiparae with 15.38%. Our notice is completely different with that of others researchers. Those researchers have found that the factor of risk at primiparae was a predominance of birth weak weight (Bwana Kangulu, *et al.*, 2014; Amine, M. *et al.*, 2009; Fatima, B., & Abbassia, D. 2013; and Miaffo, S.L. 2008).

CONCLUSION

In our scientific research, we were noticed that the praevia placenta has got an effect on the weight of birth. The risk was increased (OR : 3.7). However, the attempt was negative. The proportion discovered has been for 30% of newborn babies having a low birthweight and 52% cases of praevia placenta.

The marginal praevia placenta has got a strong association with the low birthweight. A study of big and deep spread should be done with more reliability. So, in order to reduce the neaonatal mortaliry and mother mobidity, we do recommand the awarness on the prenatal consultation, the improvement of nutrition to the pregnant woman and detection of mother health problems.

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