REVISTA ENFERMAGEM ATUAL

EPIDEMIOLOGICAL PROFILE OF PREGNANT WOMEN WITH NEAR MISS DETERMINANTS

PERFIL EPIDEMIOLÓGICO DE GESTANTES COM DETERMINANTES DE *NEAR MISS**

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ABSTRACT

Objective: To describe the epidemiological profile of high-risk pregnant women with primary determinants for maternal near miss. **Method:** This is a quantitative study, performed in a public institution. Data collection took place from October 2016 to August 2017. Data were compiled using the SPSS® version 20.0 program. The research was approved with opinion: 1,757,596, CAAE: 59935716700005231. **Results:** 319 women participated in the study, 70.5% aged 20 to 35 years, 58.6% white. Regarding obstetric characteristics, 38.2% were primiparous, 52.0% of couples had not planned pregnancy, 99.4% had prenatal care and had more than six consultations (92.5%). gestation 60, 2% were performed cesarean section. The primary determinants of near miss were: hypertension (55.5%) and infection (16.9%), followed by respiratory disorders (6.9%); neurological (6.5%); cardiac (6.3%) and hemorrhagic or coagulation (4.4%); and among the least significant are renal (2.5%) and hepatic (0.9%) dysfunctions. **Conclusion:** The study was important to know the pregnant women who have primary determinants for near miss and thus tailor care. In this sense, actions for the understanding of women in the prevention of maternal and neonatal risks should be elaborated and stimulated, aiming at prevention andhealth promotion among women.

Keyword: Pregnancy, High-Risk; Near Miss, Healthcare; Maternal Mortality; Obstetric Nursing.

RESUMO

Objetivo: descrever o perfil epidemiológico de gestantes de alto risco, com determinantes primários para *near miss* materno. **Método:** trata-se de um estudo quantitativo, realizado em uma instituição pública, por meio de instrumento semiestruturado para transcrição dos dados. A coleta de dados ocorreu nos meses de outubro de 2016 a agosto de 2017. Os dados foram compilados no programa SPSS® versão 20.0. A pesquisa foi aprovada com parecer: 1.757.596, CAAE: 59935716700005231. **Resultados:** participaram do estudo 319 mulheres, 70,5 % com idade de 20 a 35 anos, 58,6% da raça branca. No que concerne as características obstétricas 38,2% eram primíparas, 52,0% dos casais não tinham planejado a gestação, 99,4 % realizaram o pré-natal e realizaram mais de seis consultas (92,5%), quanto a resolução da gestação 60, 2% foram realizados cesariana. Entre os determinantes primários de *near miss* predominou-se: hipertensão (55,5%) e infecção (16,9%), seguidos por distúrbios respiratórios (6,9%); neurológicos (6,5%); cardíacos (6,3%) e hemorrágicos ou de coagulação (4,4%). **Conclusão:** O estudo foi importante para identificação do perfil das gestantes para determinantes primários de *near miss*, sendo possível a partir destes o planejamento e adequação da assistência pré-natal, assim como a elaboração de ações à prevenção de riscos maternos e neonatais.

Palavra-chave: Gestação de Alto Risco; *Near miss*; Mortalidade Materna; Enfermagem Obstétrica.

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REVISTA ENFERMAGEM ATUAL

INTRODUCTION

Women's health is a broad topic of significant importance within public health. About the puerperal pregnancy cycle, many studies have been developed over the years, but some points are inexhaustible, considering their importance, impact, prevalence and incidence, such as maternal mortality (MM) [1-2].

MM is an excellent indicator of women's health and, indirectly, of the health level of the population in general, to supporting analyzes of health care programs and actions. This event goes beyond the individual tragedy, constituting an aspect of human development assessment [1-2].

The World Health Organization (WHO) defines maternal death as: "the death of a woman during pregnancy or within a period of 42 days after the end of pregnancy, regardless of the duration or location of the pregnancy, due to any cause related to or aggravated by pregnancy or by measures in relation to it, however, not due to accidental or incidental causes "[3].

In view of the above, one of the millennium goals set by the WHO to be achieved by 2015 was a significant decrease in MM worldwide, but unfortunately the objective was not achieved. Thus, MM persists as a public health problem [4].

Although pregnancy is considered a physiological phenomenon, which mostly occurs without complications, a small portion of pregnant women may have or develop some morbidity and are more likely to have unfavorable developments during pregnancy and may last until the puerperium, called high-risk pregnant women. risk [5].

The main objective when establishing the concept of pregnancy risk is to identify the degrees of vulnerability to which women are exposed during pregnancy, childbirth and the puerperium. Women who survive severe pregnancy, childbirth and postpartum complications have many aspects in common with those who die from these same complications. This similarity led to the development of the concept of maternal near miss (MNM) [6-7].

The definition was established by the WHO as "a woman who almost died, but survived the complication that occurred during pregnancy, childbirth or up to 42 days after the end of pregnancy". Some parameters must be followed to classify MNM, and for early identification the primary MNM determinants (PDMNM) may be essential [8].

Currently, MNM has been an event that has been reaching more and more women in the period of pregnancy until the late puerperium and its study allows a broader quantification and a conclusion on the risk factors and determinants of life. Studies have suggested that the identification of risk factors for severe morbidity, such as MNM, can contribute to the reduction of MM, verifying the factors that are modifiable by appropriate medical and public health interventions [7].

The identification of cases of MNM appears as a promising strategy for reducing MM. Given the above, this study aims to describe the epidemiological profile of high-risk pregnant women, with primary determinants for maternal near miss.

METHOD

This is a quantitative, cross-sectional and descriptive study, part of a prospective cohort entitled High-Risk Pregnancy: Situations of Near Miss in the Maternal and Neonatal Pregnancy Cycle. The research was carried out in the maternity ward of a public institution, that is, exclusively for the Unified Health System (SUS), linked to a

REVISTA ENFERMAGEM ATUAL

state university, and a reference in the region for assistance to obstetric complications, highly complex births and care for newly - risk born.

The study population was composed of puerperal women classified as high risk during pregnancy, and who had at least one PDNMM, according to WHO, who were in a position to answer the questionnaire and agreed to participate in the research, signing the free consent term . Postpartum women diagnosed with high gestational risk, but who did not have a PDNMM, according to the WHO, were not able to respond or did not accept to participate in the research.

The sample was defined based on the institution's assistance a year before the survey, using statistical tools for its definition. In this way, the sample number of 319 women was defined, considering a sampling error of 5% and a 95% confidence level [9].

A pilot study was carried out to adjust the questions, data collection took place from October 2016 to August 2017. Divided into three stages: first stage; identification of the woman to be included in the postpartum study, second stage; consultation and transcription of the records of the medical record and prenatal card, a semi-structured form was used, and a third; interview with women at the time of the puerperium, which were held daily at the maternity hospital until the composition of the proposed sample.

At the end of each material collected, the form was checked, the chart was retrieved and the prenatal card was collected, as well as a re-interview by phone in hospital discharge situations in order to complete all questions on the form.

The data were compiled using SPSS® version 20.0. Descriptive statistics, based on relative and absolute frequency, were used to analyze the following indicators: socio-economic-demographic aspects: age group; schooling; maternal race; marital situation; income; residence. Reproductive and obstetric: number of children; interpartal interval; planned pregnancy; use of contraceptive method; performing prenatal care; prenatal location; number of prenatal consultations; risk classification noted on the prenatal card; type of delivery. Distribution of the main PDNMM and the moment when PDNMM appeared in the participant's current puerperal pregnancy cycle.

In compliance with the provisions of Resolution 466/12, of the National Health Council, this research was approved by the Research Ethics Committee Involving Human Beings with opinion: 1.757.596, CAAE: 59935716700005231.

RESULTS

The study included 319 women, with the following socioeconomic-demographic profile: 70.5% were aged 20 to 35 years; 56.1% had completed high school; 58.6% belonged to the white race; 86.8% had a partner; 48.7% had an income of three or more minimum wages; and 93.5% lived in homes in the urban area (Table 1).

REVISTA ENFERMAGEM ATUAL

Table 1 - Socioeconomic and demographic characterization of women with a PDMNM presence, Londrina- PR, Brazil, 2019.

Variables	Frequency	
	Nº	%
Age group		
14 to 19	35	10,9
20 to 35	225	70,5
36 or more	59	18,4
Scholarity		
Elementary School	91	28,5
High School	179	56,1
Higher Education	49	15,3
Maternal rece		
White	187	58,6
Not white	132	41,3
Marital situation		
With partner	277	86,8
Without partner	42	13,2
Income (MW)*		
≤ 1	49	15,3
1 to 2	115	36,0
3 or more	155	48,7
Residence		
Urban area	298	93,5
Countryside	21	6,5
TOTAL	319	100

▲Primary determinant of Maternal Near Miss
* Minimum wage in the year of 2019- R$998,00

REVISTA ENFERMAGEM ATUAL

Table 2 is related to the reproductive and obstetric characteristics of the research participants, thus, primiparous women were the majority in the study (38.2%), followed by women who were in their second pregnancy (32.9%) and women over of two pregnancies, multiparous (28.8%). Regarding the interval between one delivery and another, the largest number of women had a period of more than two years (81.2%), when asked if the pregnancy was planned, most couples had not planned the pregnancy (52.0%), however 67.7% confirmed not using any contraceptive method (Table 2).

Table 2 - Distribution of women with PDMNM▲, according to reproductive and obstetric characterization. Londrina- PR, Brazil, 2019.

Variables	Frequency	
	Nº	%
Number of children		
Primipara	122	38,2
Secundípara (?)	105	32,9
Multiparous	92	28,8
Interpartal interval		
< 1 year	8	2,5
1 to 2 years	13	9,7
> 2 years	169	53,9
Not applicable	129	34,7
Planned pregnancy		
The couple wanted	144	45,1
Only the woman wanted	7	2,1
Only the man wanted	4	1,2
The couple did not want	166	52,0
Use of contraceptive method		
Yes	103	3,2
No	216	67,7
Performed prenatal care		
Yes	317	99,4

REVISTA ENFERMAGEM ATUAL

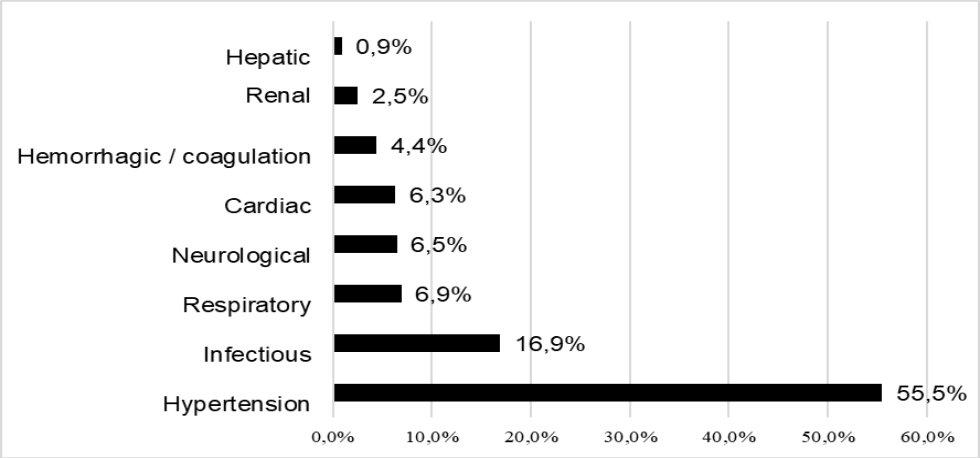
No	2	0,6
Prenatal place		
Primary service	68	21,3
Reference service for high-risk prenatal care	245	76,9
Private service	6	1,8
Number of prenatal consultations		
Less than 6	24	7,5
6 or more	293	92,5
Risk rating noted on the prenatal card		
Yes	228	71,4
No	91	28,5
Type of delivery		
Spontaneous delivery	127	39,8
Caesarean	192	60,2
TOTAL	319	100

▲Primary determinant of maternal Near Miss

In general, most women performed prenatal care (99.4%), in referral services for high-risk prenatal care (RSHRPC) (76.9%), with more than six consultations during pregnancy (92 , 5%), and the risk classification noted on the prenatal card (71.4%) with the resolution of pregnancy being predominantly cesarean (60.2%) (Table 2).

Figure 1 - Distribution of PDMNM▲ presented by the research participants, according to systems dysfunction. Londrina- PR, Brazil, 2019.

REVISTA ENFERMAGEM ATUAL



▲Primary determinant of maternal Near Miss

Figure 1 describes the absolute frequency of PDNMM according to the criteria established by WHO. The predominant PDNMM in the research was disorders related to hypertension (55.5%), followed by infectious determinants (16.9%). In relation to the other determinants, the rates were similar, among the most expressive are: respiratory (6.9%); neurological (6.5%); cardiac (6.3%) and hemorrhagic or clotting (4.4%); and among the least expressive are dysfunctions: renal (2.5%) and liver (0.9%).

DISCUSSION

Some studies have presented considerations about the risk of developing a greater MNM at the extremes of age, both under 15 years old and over 35 years old, being mainly increased in the latter. This was not found in our study, since the relative frequency of primary determinants of MNM remained higher, between 20 and 35 years [5,7].

Assessing the factors associated with the race variable, the results differ from those found in the literature, which indicate that the non-white race may represent a risk factor for hypertensive syndromes in pregnant women, and represents one of the main obstetric pathologies among high-risk pregnant women [10].

Among the sociodemographic variables associated with the occurrence of PDNMM, studies show that variables such as low education and unfavorable family income, significantly increased the risk for the MNM outcome. According to the Ministry of Health, low education can represent a risk factor mainly because it is related to less access to information and limited understanding of the importance of health care [5,7].

These data are out of step with what was evidenced in this study, since the population had an income of three minimum wages, and a little more than half of the women had completed the average level, demonstrating that the degree of understanding and accessibility was favorable . Schooling is seen as a factor that increases the productivity of an economy as a whole, in addition to generating other virtuous effects, such as improved wages [11].

The first pregnancy is associated with different experiences experienced by women, and it is often at that moment that some type of circumstance associated with some pathology occurs, just as in this study other research confirms this statement [12-13].

The fact of developing a first pregnancy with some associated pathology is often an impact, especially when the pregnancy was not planned. The time taken to assimilate two new facts that significantly interfere with life and health can interfere with the progress of

REVISTA ENFERMAGEM ATUAL

pregnancy. It is noticed that family planning was not structured, because the same population that did not plan to have children, did not use contraceptive methods [14].

Even with factors that could possibly interfere with the progression of pregnancy, prenatal care was effective. The literature highlights that prenatal care is essential to ensure a safe and healthy pregnancy, in addition to a safe delivery. It is important that this monitoring is done in an RSHRPC and thus have access to all the tools necessary for the well-being of the binomial. Most women had undergone the PN in an RSHRPC and had more than six consultations, but a significant number of participants did not have the risk classification noted in the prenatal card [2.13].

The lack of information on the prenatal card, refers to a failure in filling it out, because when the pregnant woman arrives at another service, the professional who will attend her will not know necessary information about the patient. This lack of communication makes this patient late to benefit from adequate care for her comorbidities, and even for a specialized evaluation to define her diagnosis and begin the treatment recommended for that situation [15].

A significant number of cesarean sections were identified in the study, considering the population, it is particularly important that all high-risk births are attended by qualified health professionals, since timely monitoring and driving can make the difference between life and the death of the mother and the baby, but the outcome does not specifically need to be a cesarean section [16].

As in other studies, the prevalent disorder was related to hypertension, followed by infectious problems. Hypertension in Brazil is the leading cause of MM, as well as infections. Other pathologies were also present in the research, but with a less significant distribution of numbers, however all PDMNM presented in the study contribute to negative outcomes for both mother and baby if they do not have an adequate follow-up throughout the puerperal pregnancy cycle [7, 13.17].

CONCLUSION

The study demonstrated the importance of knowing the population of women who have PDMNM, as the profile of these patients over time and with changes at national and international level, are changing, however, the main PDMNM presented in the research is associated with pathologies which are constantly the subject of research, but still express a significant number and contribute to the increase in MM.

The importance of actions for health education in women with PDMNM is emphasized. The present study drew attention to the fact that women with a higher risk for maternal complications, however even with this determinant, unplanned pregnancy and the non-use of contraceptive method was present in the women surveyed. In this sense, actions for the understanding of women in the prevention of maternal and neonatal risks, must be elaborated and stimulated, aiming at prevention and health promotion among women.

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