Stillbirth of fetuses weighing 2,500g in the city of Rio de Janeiro: 2008-2017

Mortinato de fetos de 2.500 g en la ciudad de Río de Janeiro: 2008-2017

Natimortalidade de fetos com peso de 2.500g no município do Rio de Janeiro: 2008-2017

ABSTRACT

This study aims to describe care aspects of women who had stillbirths with a weight greater than or equal to 2,500 g and who died before or during their births, of mothers residing in the city of Rio de Janeiro (CRJ) in the years 2008 to 2017. This is from a descriptive, retrospective study, using secondary data, integrating variables related to the deaths of these babies, based on secondary data from the Mortality Information Systems (SIM) and Live Births (SINASC). Data collection took place during the months from January to March 2019. The stillbirth rate in the studied period was 10.1 / 1000 births and the stillbirth rate of fetuses with 2500g or more was 2.42 / 1000 born. The most frequent maternal age group was 20 to 34 years old, schooling from 4 to 11 years of study, vaginal delivery was the main route of birth, the male gender had a higher frequency of stillbirth, the vast majority of deaths occurred before the birth and had as their place of occurrence, hospitals. Diseases originating in the perinatal period were the most prevalent and the decline in uninvestigated deaths occurred in 2010, possibly related to the mandatory monitoring of these deaths from this year on.

DESCRIPTORS: Pregnancy Complications; Prenatal Care; Stillbirth; Fetal Weight.

RESUMEN

Este estudio tiene como objetivo describir aspectos asistenciales de mujeres que tuvieron mortinatos con un peso mayor o igual a 2.500 gy que fallecieron antes o durante el parto, de madres residentes en el municipio de Río de Janeiro (MRJ) en los años 2008 a 2017. a partir de un estudio descriptivo, retrospectivo, utilizando datos secundarios, integrando variables relacionadas con la muerte de estos bebés, a partir de datos secundarios de los Sistemas de Información de Mortalidad (SIM) y Nacidos Vivos (SINASC). La recolección de datos se llevó a cabo durante los meses de enero a marzo de 2019. La tasa de mortinatos en el período estudiado fue de 10.1 / 1000 nacimientos y la tasa de mortinatos de fetos con 2500 go más fue de 2,42 / 1000 nacidos. El grupo etario materno más frecuente fue de 20 a 34 años, escolaridad de 4 a 11 años de estudio, el parto vaginal fue la principal vía de parto, el género masculino tuvo una mayor frecuencia de mortinatos, la gran mayoría de las muertes ocurrieron antes de la nacimiento y tuvo como lugar de ocurrencia los hospitales. Las enfermedades originadas en el período perinatal fueron las más prevalentes y la disminución de muertes no investigadas ocurrió en 2010, posiblemente relacionada con el control obligatorio de estas muertes a partir de este año.

DESCRIPTORES: Complicaciones del Embarazo; Cuidado Prenatal; Nacido Muerto; Peso Fetal.

RESUMO

Este estudo visa descrever aspectos assistenciais das mulheres que tiveram natimortos com peso maior ou igual a 2.500g e que morreram antes ou durante os seus nascimentos, de mães residentes no município do Rio de Janeiro (MRJ) nos anos de 2008 a 2017. Trata-se de um estudo descritivo, retrospectivo, utilizando dados secundários, integrando variáveis relacionadas aos óbitos destes bebês, a partir dos dados secundários dos Sistemas de Informação sobre Mortalidade (SIM) e Nascidos Vivos (SINASC). A coleta dos dados ocorreu durante os meses de janeiro a março de 2019. A taxa de natimortalidade no período estudado foi de 10,1/1000 nascidos e a taxa de natimortalidade de fetos com 2500g ou mais foi de 2,42/1000 nascidos. A faixa etária materna mais frequente foi de 20 a 34 anos, a escolaridade de 4 a 11 anos de estudo, o parto vaginal foi a principal via de nascimento, o sexo masculino apresentou maior frequência de natimortalidade, a grande maioria dos óbitos foi antes do parto e tiveram como local de ocorrência, os hospitais. As afecções originadas no período perinatal foram as mais prevalentes e o declínio dos óbitos não investigados se deu em 2010, possível relação com a obrigatoriedade da vigilância destes óbitos a partir deste ano.

DESCRITORES: Complicações na Gravidez; Cuidado Pré-natal; Natimorto; Peso Fetal.

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INTRODUCTION

Stillbirth is a problem worldwide, having its registration started in 1928 in England and Wales. In countries like Brazil, on the other hand, it became a subject of registration later and, currently, it is still little studied, reflecting the low visibility to society, although, a large part is preventable deaths by health services actions[1,2].

According to estimates, there are around 2 to 6 million stillborns in the third trimester per year worldwide[2]. Socioeconomic characteristics are associated with these deaths, with low- and middle-income countries having them most frequently[2,3]. It is estimated that 98% of fetal deaths occur in developing countries[4].

In Brazil, the regions with the highest rates of stillbirth are in the North and Northeast, according to a study published in 2017. These regions have the worst economic and social indices in the country. The analysis of the study in question identified as determinants of stillbirth: the region of residence, maternal age (advanced and early); and as excluding from the determinants, poverty and ethnicity[1].

A data of great relevance is that most of these are preventable deaths. The Lancet series "For the End of Avoidable Stillbirth" states that half of annual deaths (1.3 million) occur during labor and birth and have, in the vast majority, preventable conditions. In the Brazilian reality, avoidability is in the resolution of problems in prenatal care, in the capture of pregnant women and in the early identification of gestational risk[4-6].

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The designation of death as preventable has different classifications and, each of them, with specific criteria. This type of classification was registered in Chile in 1979, by Erica Taucher, a surgeon, and in 1980, in Europe, the classification of Wigglesworth, a pediatric pathologist. In Brazil, the first method of classifying infant death was developed by Luis Patrício Ortiz, better known as a list of the São Paulo State Data Analysis Foundation (SEADE Foundation). In 2007, they prepared the most recent Brazilian classification of infant deaths called the List of Causes of Avoidable Deaths due to Interventions within the Unified Health System - SUS[7].

There is a gap between the high rates of deaths with potential avoidability and this issue receives little attention from public policies and scientific studies, in addition, even with the recent Ordinance of MS No. 72, of January 11, 2010[8] that establishes the mandatory surveillance of fetal death in SUS, we still do not have the real dimension of these deaths and their repercussion for women and their families[6].

Fetal deaths reflect the living conditions of a population and the quality of health services provided and are classified according to the underlying cause. Stillbirth is an adverse result of pregnancy and challenges in determining its incidence include: late registration of pregnancy; insufficient prenatal care to determine maternal conditions; lack of technologies to perform, for example, autopsy; absence of a single system to classify the causes of stillbirths[9,10].

A survey in the Netherlands, a country with the highest economic level, found that 65% of all stillborns were due to placental causes. In this same study, they addressed the causes of "other locations in the Global Network" with fewer resources, and 46.6% of these deaths had causes

attributable to intrauterine fetal asphyxia. The authors argue that these differences may be related to the lack of a single standard for classifying these deaths, and take as an example the pregnant woman with preeclampsia (Pe) who evolves to stillbirth, where, for them, Pe can cause placental changes and, therefore, fetal asphyxia and, the evaluation made for analysis of death can choose which direction to go - maternal (Pe) or placental conditions[10].

The most recent strategy to confront stillbirths, at the World level, is the action plan for all newborns launched in 2014 at the World Health Assembly (MAS), which aims to reduce the number of stillbirths per thousand live births of 18 , 4 in 2015 to 12 in 2030, as a strategy to prevent these deaths[11].

In Brazil, the information systems on Mortality (SIM) and Live Births (SI-NASC) were created by DATASUS and have the purpose of obtaining data on mortality and births in the country, in addition to subsidizing demographic and health indicators. SIM has gaps in terms of coverage and quality of information that vary according to the country's regions[12]. The analysis of the stillbirth data of fetuses with 2500g or more of birth weight, theoretically viable, can inform about the behavior of rates over time, the main causes related to deaths and guide public policies to face this problem.

Given this context, this research aims to describe care aspects of women who had stillbirths with a weight greater than or equal to 2,500g who died before or during their births, in the city of Rio de Janeiro (CRJ) in the years 2008 to 2017.

METHODOLOGY

Study with a quantitative, retrospective, and descriptive approach. The last ten years with data available in the systems were selected for analysis. Data collection took place through the Informatics Department of the Unified Health System (DATASUS).

The variables used and available in the aggregated data of the TABNET were: death by residence / according to municipality / fetal death rate in the CRJ, birth weight, sex, place of occurrence, mother's age, mother's education, type of delivery, relationship death childbirth, death investigated, chapter ICD-10. The search criteria were babies weighing 2.500g or more who died before or during their births, in hospitals located in the city of Rio de Janeiro (CRJ) in the years 2008 to 2017. Data collection occurred in the months January, February, and March 2019. Data were stored and analyzed using Microsoft Excel 2010.

A taxa de mortalidade fetal em cada ano, foi calculada a partir do seguinte método: Número de Óbitos Fetais (22 semanas de gestação e mais), de mães residentes/ Número de nascimentos totais de mães residentes (nascidos vivos mais óbitos fetais de 22 semanas e mais de gestação) x 1000[8].

RESULTS

Assistance aspects of fetal deaths with weight greater than or equal to 2,500g according to residence (CRJ) in a decade
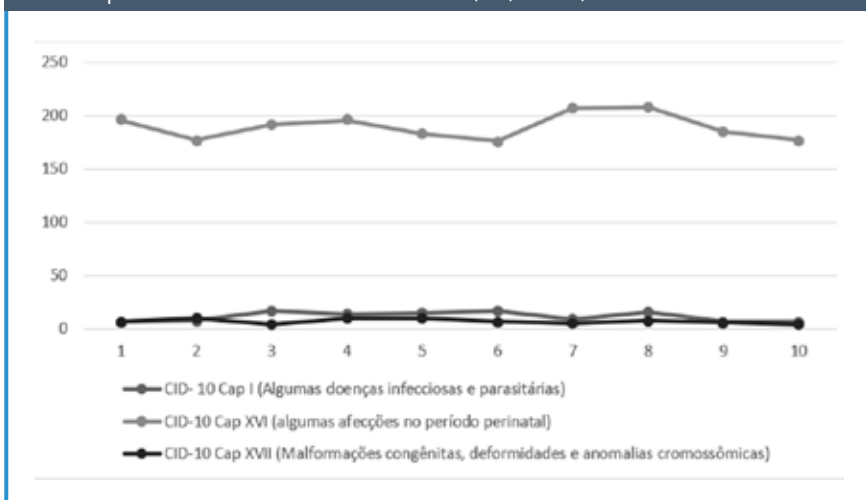
During the period evaluated, there were 2010 fetal deaths with birth weight greater than or equal to 2,500g, resulting in an average rate of 11.14 per 1000 total births.

According to Graph 2 below, the main chapter of the ICD-10 related to fetal death weighing more than or equal to 2,500g, was the XVI, which includes diseases in the perinatal period.

Graph 1. Fetal death rate. Rio de Janeiro, RJ, Brazil, 2008-2016
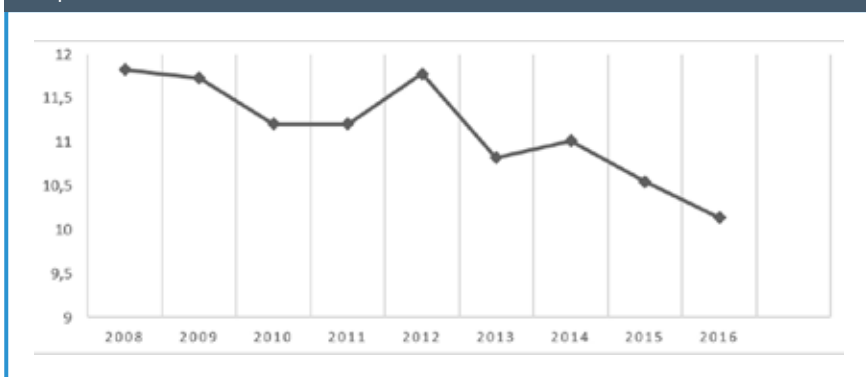
Graph 2. Numbers of stillbirths with a weight greater than or equal to 2.5000g and Chapters of the ICD-10. Rio de Janeiro, RJ, Brazil, 2008-2016

- CID- 10 Cap I (Algumas doenças infecciosas e parasitárias)
- CID-10 Cap XVI (algumas afecções no período perinatal)
- CID-10 Cap XVII (Malformações congênitas, deformidades e anomalias cromossômicas)

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An important surveillance tool is the fetal death investigation form and this has good adherence by the CRJ, as shown in Graph 3.

The moment of fetal death in relation to childbirth may reflect the need for improving care in services, such as: prenatal care, obstetric emergency, and care during childbirth. When this occurs, according to Graph 4, most before delivery, we have aspects prior to this as a point of analysis.

DISCUSSION

According to the data presented in Graph 1, it was found that the fetal mortality rate fluctuated slightly over the ten years, with a tendency to decline, except in the years 2012 and 2014. The CRJ fetal mortality rate is below the target set by the World Health Assembly for 2030[12,13].

In general, boys die more than girls in almost all causes and, earlier[14]. And in this study, of all fetal deaths with a weight greater than or equal to 2,500g in the years analyzed, the male gender had a higher number of deaths. In 2011 there was no record of the sex of birth of fetal deaths in the TABNET DATASUS[15].

A study carried out in 2012, also using SIM data for the years 2000 to 2009, discussed male vulnerability. Male stillbirths were more frequent than females. Still according to the study, the causes for men to die more than women can be pointed out as related to risk factors and factors related to innate biological differences, in which the male, would be more vulnerable to the immediate effects of some diseases[16].

The municipality showed a decline in uninvestigated deaths, which occurred in 2010, possibly related to the mandatory surveillance of these deaths, starting this year. The mandatory surveillance of fetal and infant death in the health services (public and private) that are part of SUS occurred through Ordinance No. 72, of January 11, 2010[8].

Regarding sociodemographic data, the mother's most prevalent age was 20 to 34 years and schooling from 4 to 11 years of study. This translates into a group of young women who are not members of what is called "advanced maternal age" and which may increase the suspicion that these deaths are preventable. The concept of preventable death is related to the quality of health care and can be understood as a "sentinel event"[17].
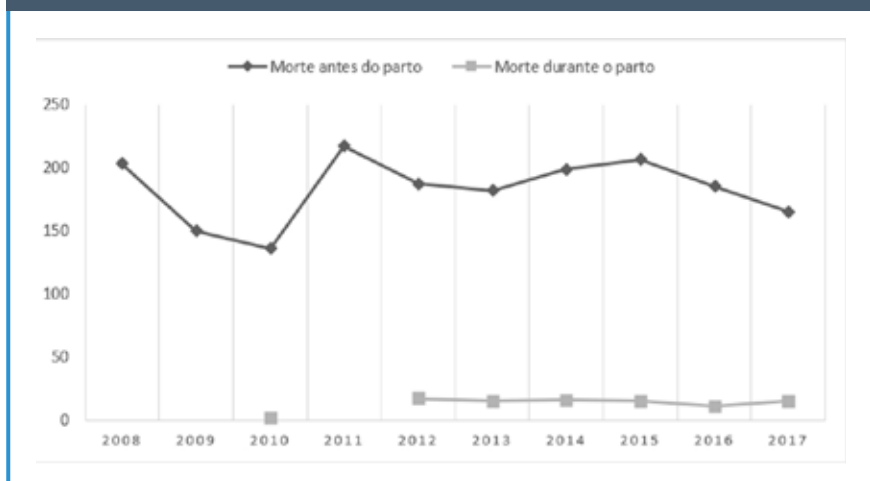
An important data in Graph 4 refers to the number of babies who die before delivery. It is worth arguing that they may have died before or during labor. Delivery interpreted from its clinical periods; we have that the first clinical period covers what we call labor. Another variable that could bring us important information about these deaths is the number of prenatal consultations, which was not found available in this search.

The vaginal route was the most frequent in the births of the stillborn children in the study. Considering that when comparing the birth route in the city of RJ of live fetuses in the same decade, we have that in all years, babies were born mainly by cesarean sections. We will not be able to answer two questions with this study alone: Even though the number of stillbirths was small at the time of delivery itself, did these occur before or during labor? How many died during cesarean section and vaginal delivery?

Graph 3. Number of stillbirths and death investigation. Rio de Janeiro, RJ, Brazil, 2008-2016

Graph 4. Moment of death in relation to childbirth. Rio de Janeiro, RJ, Brazil, 2008-2016

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There are a lot of ignored variables. Education was one of the most ignored, which may suggest the professional's inability to recognize it as relevant to the causality of fetal death.

The year 2010 presented divergent data, because despite presenting the information regarding fetal deaths, it registered 75 postpartum deaths, which characterize the stillborn. It is worth mentioning that all data in the table were based on their inclusion, since it was not possible to segregate them. The number of ignored (65) in terms of education was another fact that stood out this year, due to its higher number in comparison to other years.

According to the Evidence-Informed Policy Network (EVIPnet), fetal death shares causes with early neonatal death (number of deaths from 0 to 6 full days of life), reiterates that it is little known in Brazil, but that is part of actions to reduce maternal and child mortality. Fetal death is part of perinatal mortality, since it includes both fetal and early neonatal deaths and, for both, there are preventable causes, such as:[18]

1) Related to assistance: difficulties in accessing and using health services, poor quality of care for prenatal care, childbirth, and newborns.
2) Social and economic inequalities.
3) Vulnerable populations.

CONCLUSION

Fetal death with a weight greater than or equal to 2,500g, this weight considered ideal at birth, brings with it issues related to perinatal health, quality of care and public policies with a focus on preventive measures. Most deaths in the CRJ occurred due to diseases related to the perinatal period and the mode of delivery did not characterize additional risk, since the majority occurred before delivery. This may be related to the quality of prenatal care and assistance in obstetric emergencies.

These deaths have a great impact on the lives of women and family members who experienced pregnancy until the last trimester and the negative outcome, often unexpected, has a strong harmful potential. At CRJ, there are records of investigations of these deaths, as we have seen, it remains to be seen whether the services receive returns and whether they are able to promote preventive practices to reverse this tragedy. ■

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