

EPIDEMIOLOGICAL PROFILE OF THE BINOMIAL MOTHER AND CHILD IN THE "HOSPITAL MATERNIDADE MARIANA BULHÕES", IN NOVA IGUAÇU, RJ

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Abstract: Introduction: Syphilis is an anomaly that presents the highest rates of infections through vertical contamination, among all diseases transmitted in the pregnancy-puerperal period. Justification: The relevance of this research is justified by the understanding of the situation in question and the factors associated with the number of cases of congenital syphilis. Objective: To study the epidemiological profile of the binomial mother and child and identify the epidemiological profile of cases of congenital syphilis at Maternidade Mariana Buniões in the last five years. Method: retrospective, descriptive, qualitative study based on data from the Information and Notifiable Diseases System (SINAN) of congenital syphilis in the period from 2015 to 2020. A total of 2211 pregnant women with congenital syphilis were notified, with a mean age of 23.3 years (S= 5,6). The majority with ignored schooling 32%, 96.7% self-declared brown, being found at the time of delivery/curettage 51%, the ignored treatment prevailed in these pregnant women 45.55%. 49.7% were female, 78.7% were brown, 80.2% used crystalline penicillin G treatment, 93.7% had favorable outcomes, and 93.7% had live births. We conclude that the entire course of these pregnant women must be followed in this line of care, with the aim of detecting and solving possible failures in the early diagnosis of syphilis in this target public, in order to better and faster start treatment.

Keywords: Congenital syphilis; nursing care; epidemiological.

INTRODUCTION

Syphilis is a chronic-systemic disease and exclusive to the human species (SILVA et al., 2022). Being a gram-negative bacterium of the spirochete group, *Treponema Pallidum* is the cause of syphilis. Its transmission can be sexual and vertically during the transit of

the fetus through the birth canal, if there is an active lesion. Possibly, congenital syphilis is influenced by the stage of the disease in the mother and the duration of fetal exposure (BRASIL, 2019).

Syphilis is an anomaly that presents the highest rates of infections through vertical contamination, among all the diseases transmitted in the pregnancy-puerperal cycle period (COSTA et al, 2013). According to the World Health Organization, for the diagnosis of congenital syphilis, it is necessary to estimate the epidemiological clinical history of the mother, perform a detailed physical examination of the child and evaluate the results of laboratory tests and radiological examinations (World Health Organization, 2016).

In 1986, congenital syphilis was added to the list of compulsory notification. The compulsory notification of a disease tends to accumulate data necessary to comply with an analysis that leads to interventions for its reduction and consequences (SARACENI et al., 2017; NUNES et al., 2017).

The treatment for congenital syphilis according to the Ministry of Health is performed using benzathine penicillin; both in the pregnant woman and in the partner, this during prenatal care (BRASIL, 2015).

Souza and Beck (2019) mention that from 1998 to 2018, 188,445 cases of congenital syphilis in children under one year of age were reported in the Information System for Notifiable Diseases (SINAN), of which 83,800 (44.5%) were from the Southeast region. This value demonstrates an increase in the registration of congenital syphilis, which instills difficulties in diagnosing this condition and deficiencies in the quality of prenatal care and delivery. These causes have a high financial cost for the health system, in addition to a social shock related to the sequelae of the disease.

JUSTIFICATION

The relevance of this research is justified by the understanding of the situation in question, such as the factors associated with the number of cases of congenital syphilis, as well as its frequency and control, the need for improvement in the records of cases of infection, determined by risk behavior to which patients affected by syphilis have been exposed, in addition to controlling the epidemic process, prioritizing the interruption in the vertical transmission chain, requiring qualified and resolute assistance from the nursing team, in order to intervene in this transmissibility chain. As a result of these facts, prenatal care is essential in order to prevent congenital syphilis. It is worth noting that infection prevention measures are simple and inexpensive. Therefore, this study may contribute to the reformulation of health actions tailored to that the risks are revealed, as well as expanding society's knowledge regarding the theme developed

Given the above, this study is based on the following guiding questions:

What is the epidemiological profile of patients with congenital syphilis at "Maternidade Mariana Bulhões" in the Municipality of Nova Iguaçu in the State of Rio de Janeiro?

To answer the question mentioned above, the following objectives were outlined:

General: To study the epidemiological profile of the binomial mother and child affected by congenital syphilis at Maternidade Mariana Bulhões in the last 5 years.

Specific: To identify the epidemiological profile of cases of congenital syphilis at Maternidade Mariana Bulhões in the municipality of Nova Iguaçu.

METHODOLOGY

Descriptive epidemiological study with a qualitative, retrospective approach. The research was carried out in the Municipality of Nova Iguaçu in the State of Rio de Janeiro, Brazil. According to Godoy (1995, p.158), qualitative research does not seek to enumerate and/or measure the events studied, nor does it use statistical instruments in data analysis, it involves obtaining descriptive data about people, places and interactive processes through direct contact with the researcher with the situation studied, seeking to understand the phenomena according to the perspective of the subjects, that is, the participants of the situation under study, and the interpretation of the facts of the physical world without interference from the researcher.

In retrospective research, the study is carried out from records of the past, and moving forward from that moment to the present. It only becomes feasible when files with complete and organized protocols are available (GIL, 2002).

The data collected were the medical records of pregnant women who underwent prenatal care from 2015 to 2020 at the Maternidade Mariana Bulhões in the municipality of Nova Iguaçu with congenital syphilis notified in SINAN (System of Information and Notifiable Diseases) and DATASUS data. Epidemiological Surveillance located at the Vasco Barcelos Health Center, in October 2021. At the time of data collection, the SINAN system did not contain information relevant to the year 2021. As for the choice of maternity hospital, it was due to the institution being a reference for high-risk pregnant women, in addition to providing assistance to all pregnant women, puerperal women and new-borns in Nova Iguaçu and other municipalities in Rio de Janeiro.

The variables investigated were the pregnant women's sociocultural and clinical data: age, race/color, education, municipality where prenatal care was performed, non-treponemal test, treponemal test at delivery-curettage, treatment scheme.

Regarding the variables of the newborn: age, sex, race/color, non-treponemal peripheral blood test, treponemal test (after 18 months), non-treponemal CSF test, evidence of *Treponema pallidum*, ascending titration, CSF alteration, treatment scheme, clinical diagnosis. According to Marconi and Lakatos (2003, p.137, a variable can be considered as a classification or measure, a quantity that varies, an operational concept, which contains or presents values aspects or factor, discerns in an object of study and measurable. The values that are added are an operational concept, to transform it into a variable, they can be quantities, qualities, characteristics, magnitudes, traits, etc., which change in each particular case and are totally comprehensive and mutually exclusive. The operational concept can be an object, process, agent, phenomenon, problem, etc.

This study is based on resolution 466/12 of the National Health Council on ethics in research with human beings and approved by the Ethics Committee of Hospital Geral de Nova Iguaçu CEP 4847597 CAAE 48027021.60000.5254 and for the Board of Maternidade Mariana Bulhões where the Letter of Consent.

RESULTS AND DISCUSSIONS

According to the data made available by the Epidemiological Surveillance of the Municipality of Nova Iguaçu RJ, based on SINAN, we can see in the graph that the Hospital Maternidade Mariana Bulhões showed that pregnant women residing in the city of Nova Iguaçu, presented a higher prevalence with results of 75, 81%, followed by

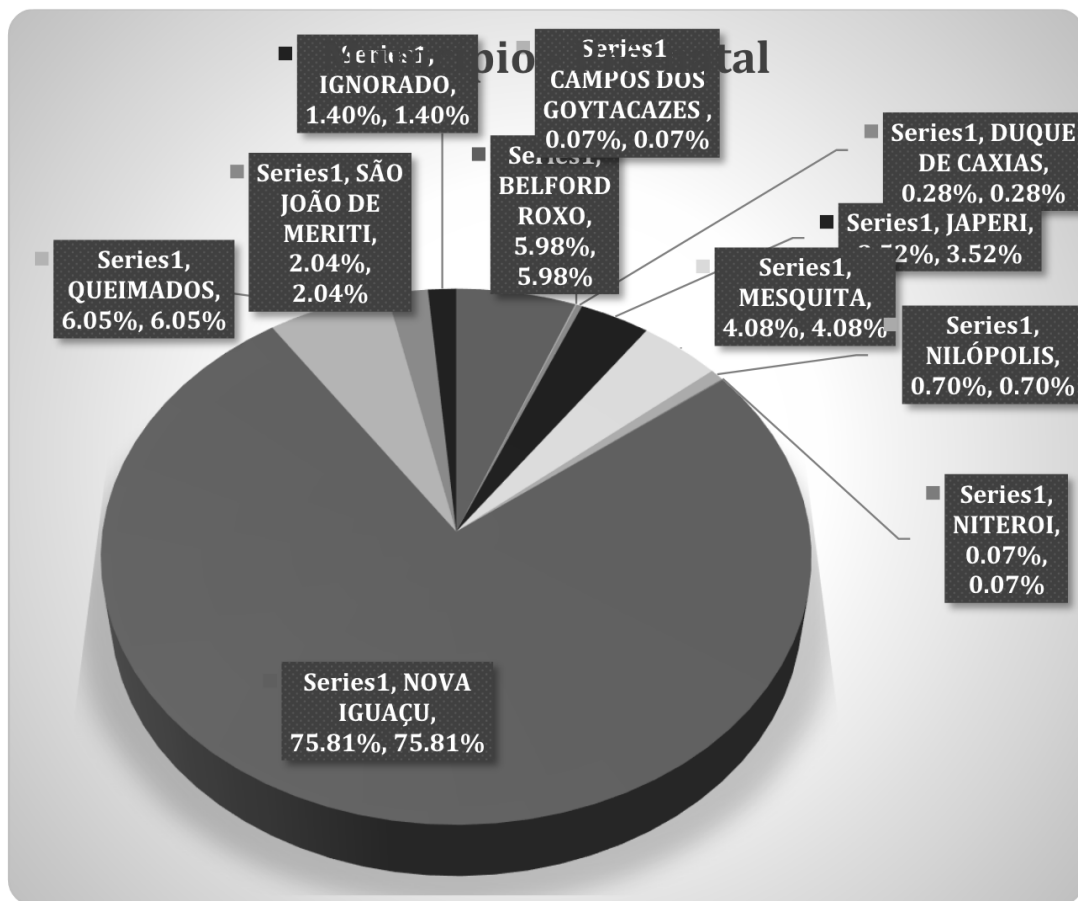


Figure 1- Map with the locations of pregnant women assisted at Maternidade Mariana Bulhões.

Source: Epidemiological Surveillance of Nova Iguaçu (2021).

by Queimados 6.05% and Belford Roxo with 5.98%. Between 2016(238) and 2017(536) there was a 125% increase in notifications of cases of congenital syphilis.

In this study, 2211 young pregnant women were identified, with a mean age of 23.3 years (S=5.6), brown 1705 (96.7%) and black 238 (19.5%), with unknown education 722 (32%) and incomplete primary secondary education 565 (25.6%). These results are similar to a study carried out in Pernambuco that talks about pregnant women aged between 18 and 38 years, in which the majority declared themselves brown with low education (MELO et al., 2020). A study in Bahia also observed that low education is a risk factor, that the mother's race in most cases was brown (59.1%) followed by black (6,8%),

(SOUSA et al., 2019). The high percentage of black and brown color showed similarity to the results found. (CORRÊA et al., 2014).

With regard to the maternal diagnosis, it was performed at the time of delivery/curettage 1146(51.8%), during childbirth 664 (30.0%). In the survey in Montes Claro-MG, the diagnosis of the pregnant woman was found (48,4%) for those who were followed up during prenatal care (62.4%) it portrayed diagnosis at the time of delivery or curettage (LAFETA et al., 2016). In Bahia, the observed results indicated that the maternal diagnosis occurred during prenatal care 3,079(43.7%), at the time of delivery/curettage 1,025(14.6%) and after delivery 54(0.8%). Contrasting with our results (SOUSA et al., 2019).

The treatment outcome in women with congenital syphilis detected the ignored with 1005(45, 55%), inappropriate 841(38). The protocol of "Maternidade Mariana Bulhões" is guided by the Ministry of Health (PCDT), in the institution when pregnant women have inadequate treatment, the treatment scheme is restarted in the unit and medication is received throughout the hospitalization period. of health to continue and complete the treatment. The Ministry of Health emphasizes that the large number of pregnant women do not receive treatment properly or are not treated (DOMINGUES et al., 2021).

The results of the maternal treponemal test showed reagent 1222(55.3%), non-reactive 496(22.4%). Maternidade Mariana performs a rapid syphilis test in all pregnant women, as well as in women undergoing abortion. They are sent to the delivery room and [or Obstetric Surgical Center (CCO) with the test result attached to the medical record. and absence of syphilis infection, there is no need to outline behaviours for the pregnant woman and the child (Clinical Protocol and Therapeutic Guidelines for Comprehensive Care for People with Sexually Transmitted Infections (PDCT). The result of the reactive (79.6%) and non-reactive treponemal test (10.0%) showed similarity with our finding (OLIVEIRA et al., 2021). Treponemal tests present qualitative results where they confirm the diagnosis, but do not differentiate between the treated and untreated patient (MOREIRA, 2018).

As for the non-treponemal test, 2104 (95.2%) presented a reagent test and 52 (2.4%) ignored it. Following the PCDT, Maternidade Mariana Bulhões established that the result of the rapid test is non-reactive and absent of syphilis infection, there is no need to outline conducts for the pregnant woman and the child. Non-treponemal test used in the initial stage of infection, with

high sensitivity and lower cost, may present false-positive results (MOREIRA, 2018). Antilipid antibodies detected by the test may non-specifically increase during the course of pregnancy. The Venereal Disease Research (VDRL) exam is the recommended methodology and must be requested in the first trimester, third trimester and at the time of delivery. the spread of congenital syphilis (SOUSA et al, 2014).

The pursuit of congenital syphilis in female new-borns 1099(49.7%), male 1055(47.7%), not having much difference between the values. Analysis described in Caxias in Maranhão regarding gender, the male sex showed 11 (61.1%), female7 (38.9%). (CONCEIÇÃO; CÂMARA; PEREIRA, 2019).A survey in Porto Velho in Rondônia evaluated the sex of the fetuses with congenital syphilis 99 (50%) male, 92 (46.46%) female. (MOREIRA et al, 2017). Results are diverging from the research in question.

With regard to the baby's race, brown color predominated 1739 (78.7%), white 217 (9.8%). The findings were identical to our results, where brown color 10 (55.6%) and white 1 (16.7%). As described, most pregnant women declared themselves brown (CONCEIÇÃO; CÂMARA; PEREIRA, 2019).

In the search for results, we obtained in the non-treponemal child-peripheral blood test the reagent 1970(89.1%), not performed106(4.8%). In the State of Paraná, it showed repercussions of the new-born's peripheral blood with 79 (53.74%) non-reagent 39 (26.53%), not performed 21(14.29%), ignored 8 (5.44) (PADOVANI; OLIVEIRA; PELLOSO, 2018). In Rondônia, the peripheral blood treponemal test proved to be 161 (81.31%) reactive, 22 (11.11) non-reactive, 7 (3.54) not performed and 8 (4.04%) ignored (MOREIRA et al., 2017).

The non-treponemal CSF test was found non-reactive in 1208(54.6%), ignored 541(24.5%).The investigation directed at new-borns observed that 26(32.1%) did not complete X-ray of long bones and those who did not undergo the CSF test were estimated at 23%(28,4). The author also clarifies that in congenital syphilis, physical examination, VDRL test of peripheral blood of the NB, examination of cerebrospinal fluid is essential (HOLZMANN et al, 2018).

Evidence of treponema pallidum showed examination not performed 1573(71.1%) and ignored 439(19.9%). Direct tests on samples collected from lesions are methods to detect treponema pallidum through immunofluorescence or molecular biology technique by polymerase chain reaction, dark field microscopy, silver impregnation (DOMINGUES et al., 2021).

In the cerebrospinal fluid alteration, the result scored not found 897(40.6%), not performed 694(31.4%). In the Unit, syphilis tests and complementary exams for children with congenital syphilis, born to inadequately treated mothers are performed: Blood count Complete, VDRL, X-ray of long bones and lumbar puncture, eye fundus and Transfontanel Ultrasound. It is essential to check liquoric, clinical, serological, and haematological alterations to treat congenital syphilis in new-borns (BENITO; SOUZA, 2016). da Saúde recommends, when there is confirmation of cases of congenital syphilis with cerebrospinal fluid alteration, performing new lumbar punctures 3 and 6 months after the end of treatment.

The clinical form pointed out the symptomatic with 1074 (48.6%), ignored 629 (28.4%). In this research, the findings observed the asymptomatic 153 (77.27), symptomatic 4 (4, 02%) calling attention to the ignored 40 (20.2%) (MOREIRA et al., 2017). It is known that at birth more than

50% of carriers of sc are asymptomatic while the others will present the clinical picture within three to fourteen weeks (Silva; Sousa; Sakae, 2017). Another study showed 75.5% asymptomatic, 11.2% symptomatic (COSTA et al., 2022). This research is opposed to the results found.

As for the ascending title, the numbers showed that the not performed stood out 1579 (71.4%), ignored 412 (18.6%). New-borns from mothers with low titers of the non-treponemal test showed negative VDRL at birth, however, a few days after birth, they were diagnosed with transplacental infection in the final weeks of pregnancy (HERBMULLER; FIORI; LAGO,2015).

The treatment scheme of crystalline penicillin G100,000 to 500 IU]KG [day with 1774(80, 2%). Benzathine and crystalline penicillin is the first drug of choice in the treatment of congenital syphilis (FIGUEIREDO et al., 2020). Inadequate treatment occurs when any drug other than penicillin or incomplete, even if it is penicillin, with an ineffective procedure for the clinical phase of the infection or therapeutic basis within the period of 30 days prior to delivery (BRASIL, 2019).

The evolution of cases highlighted the living 2,072 (94.7%), stillborn 46 (2.1%). This outcome reflects the decline in the rates of death or abortion due to congenital syphilis. Which shows that even with the increase in congenital syphilis in the Municipality, with the treatment, a decrease in deaths linked to the diagnosis was noticed. at the time of discharge. This way, new-borns are referred to the outpatient clinic and IST's of the General Hospital of Nova Iguaçu, for follow-up and follow-up, as recommended by the Ministry of Health. positive and consistent or absent treatment with follow-up of congenital syphilis, live births with 163 (89, 6%), stillborn 7(3,8%) and 12(6,6%) abortion

(HERBMULLERR;FIORI;LAGO,2015). Complementing the findings, a study observed a decrease in the infant mortality rate globally (TAVARES et al., 2016).

FINAL CONSIDERATIONS

The present study was able to answer the guiding question mentioned in the introduction, as well as to achieve its objectives on the basic epidemiology of the binomial mother and child in relation to Congenital Syphilis.

Through the results collected in the research, due to the fact that the referred maternity is a reference for high-risk pregnant women and provides assistance to childbirth and puerperal women, it is noted that most of the pregnant women who were assisted are from the municipality itself, brown, of childbearing age and incomplete high school.

But something that was demonstrated during the research that is worrying: a failure in the period of early diagnosis of the disease in pregnant women, as they are only diagnosed, for the most part, at the time of delivery and/or curettage in the maternity ward, not having the diagnosis early so you can start treatment properly, as recommended by the Ministry of Health. Since the institution is a reference for high-risk pregnant women, in addition to providing assistance to all pregnant women, mothers and new-borns in Nova Iguaçu and other municipalities in Rio de Janeiro.

In addition, with a positive test (performed at the maternity ward), treatment is considered “ignored”, having to start at the institution at the time of delivery and/or curettage and end after delivery.

Regarding the child, who is born with a positive diagnosis, the maternity hospital bases its treatment on the Clinical Protocol and Therapeutic Guidelines for Comprehensive Care for People with

Sexually Transmitted Infections (PCDT) of the Ministry of Health, carrying out its follow-up, through radiography, medication, cerebrospinal fluid evaluation and constant syphilis laboratory tests.

With this, we conclude that one must follow the entire course of these pregnant women in this line of care, with the objective of detecting and solving possible failures in the early diagnosis of syphilis in this target public, in order to better and faster start the treatment. However, we must point out that through the conducts outlined by Maternidade Mariana Bulhões when receiving these pregnant women who have a positive test, the number of live children has increased and the number of stillbirths has decreased.

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