

*EPIDEMIOLOGICAL PROFILE OF CONGENITAL SYPHILIS IN BRAZIL FROM 2014 TO 2018***CONTRIBUIÇÕES DA MONITORIA ACADÊMICA PARA A FORMAÇÃO EM ENFERMAGEM:
REVISÃO INTEGRATIVA**

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ABSTRACT

Objective: to describe the epidemiological profile of cases of congenital syphilis (SC) in Brazil from 2014 to 2018. **Method:** epidemiological study with a quantitative, descriptive and exploratory approach, with data collection performed on the Platform of the Department of Informatics of the Unified Health System Health. **Results:** in the period from 2014 to 2018 there were 108,364 cases of SC, the highest rate was in the year 2018, corresponding to 24.19% of registered cases. 80.41% of pregnant women underwent prenatal care and 55.07% were diagnosed during the same period, 56.98% of them underwent inadequate treatment and 26.63% did not receive it, this fact was also relevant with regard to partner treatment, of which 60.09% did not perform. **Conclusion:** the incidence of SC is considered an indicator of the quality of prenatal care. There is a prevalence of women aged 20 to 29 years, with incomplete elementary education and mixed race. The diagnosis was made at the time of prenatal care and maternal treatment was inadequate and that of the sexual partner was not carried out. The predominant age of children affected with SC were those younger than 7 days, and 2018 was the year with the highest notification of death in children under 1 year with the disease.

Keywords: Congenital Syphilis; Public Health; Family Health; Obstetric Nursing.

RESUMO

Objetivo: descrever o perfil epidemiológico dos casos de sífilis congênita (SC) no Brasil no período de 2014 a 2018. **Método:** estudo epidemiológico de abordagem quantitativa, descritiva e exploratória, com coleta de dados realizada na Plataforma do Departamento de Informática do Sistema Único de Saúde. **Resultados:** no período de 2014 a 2018 houve 108.364 casos de SC, o maior índice foi no ano de 2018, correspondendo a 24,19% dos casos registrados. 80,41% das gestantes realizaram o pré-natal e 55,07% foram diagnosticadas durante o mesmo, 56,98% delas realizaram o tratamento inadequado e 26,63% não o realizaram, esse fato também foi pertinente no que diz respeito ao tratamento do parceiro, dos quais 60,09% não realizaram. **Conclusão:** a incidência de SC é considerada um indicador da qualidade de assistência de pré-natal. Verifica-se a prevalência por mulheres com idade entre 20 a 29 anos, com ensino fundamental incompleto e pardas. O diagnóstico deu-se no momento do pré-natal e o tratamento materno, foi inadequado e o do parceiro sexual não foi realizado. A idade que predominou das crianças acometidas com SC foram as menores de 7 dias, e 2018 foi o ano com maior notificação de óbito em menores de 1 ano com a doença.

Palavras-chave: Sífilis Congênita; Saúde Pública; Saúde da Família; Enfermagem Obstétrica.

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INTRODUCTION

Sexually Transmitted Infection (STIs) are caused by viruses, bacteria or other microorganisms, transmitted mainly by sex contact without using a male or female condom, with a person who is infected and using syringes, needles or other sharp cutting material shared. The transmission can also happen from mother to son during the pregnancy, childbirth or breastfeeding (vertical transmission) ⁽¹⁾.

Thus, as STIs are considered a public health problem because a failure in early recognition and treatment of them, has countless consequences for the carrier; and in developing countries, there is contamination of over a million people a day, having syphilis with the highest prevalence each year, representing 5.6 million cases. Most cases are found in primary, tertiary and gestational ⁽²⁾.

Congenital syphilis is the result of hematogenous dissemination of *Treponema pallidum* by transplacental route, of the untreated infected pregnant woman or improperly treated, for your concept. For classification purposes, it presents two stages: congenital syphilis early, diagnosed up to two years of life; and late congenital syphilis, diagnosed after this period ⁽³⁾.

Syphilis in pregnant women is responsible for more than half a million stillbirths and abortions annually, making it one of the problems of most challenging public health this early millennium, with international commitment elimination ⁽⁴⁾.

In Brazil, in general, in the last ten years, especially from 2010, there was a progressive increase in the incidence rate of congenital

syphilis: in 2008, the rate was 2.0 cases/1,000 live births and, in 2018, it was more than four times the rate of 2008, increasing to 9.0 cases/1,000 born live ⁽⁵⁾.

When the disease is not treated early, can cause serious consequences for the conceptus: abortion, fetal death and motor, cognitive, neurological, visual and auditory sequelae. It is understood that the vertical transmission can be prevented since the pregnant woman has been identified with the pathology early and through this is properly treated ⁽⁶⁾.

This research is justified due to SC being one of the main causes of mortality neonatal in Brazil. Therefore, this study aims to characterize the epidemiological profile of congenital syphilis in Brazil from 2014 to 2018, aiming to respond to the following guiding question: “What is the epidemiological profile of congenital syphilis in Brazil in the years 2014 to 2018?”

METHOD

This is an epidemiological study descriptive and quantitative. The data collection was held on the Department's Platform Information Technology of the Unified Health – DATASUS, looking for cases notified in the Information System of Notification Appeal – SINAN, of syphilis in Brazil in the period from 2014 to 2018.

The notification of syphilis in Brazil is recent (occurred through ordinance 2,472, published on August 31, 2010), which justifies the period of analysis of this study, in however the year 2019 was not analyzed due to the time it took to collect data and this year has not been finalized

completion of the information. Thus, included 10 variables extracted in this system information and health as the largest epidemiological and approach impact on literature.

The selected variables were: number of cases in children under one year, maternal age group, education, race/color, performance of prenatal care, moment of diagnosis, maternal treatment scheme, partner treatment, CS cases according to child's age and number of deaths in under one year. After data collection, tabulation was performed at Microsoft Office Excel 2016 through information TabWin/TabNet.

For the composition of the tables, absolute values (N) and in percentage (%) of each variable. To purchase the absolute value is the sum of every year regarding the study of each individually. Is for obtaining the percentage of a sample during all years, there is also the sum of them individually, that is, in the last five years studied, and divided by the total of all of them and later with the result found is multiplied by 100 ⁽⁷⁾.

Because this study added secondary data available in databases public domain government data and not directly involved human beings, it was not necessary to submit the project to the Research Ethics. However, the other norms related to research.

RESULTS

In the period between January 2014 to December 2018 were notified in the Health Information System–SINAN notification, 108,364 cases of syphilis in Brazil (Table 1). The data show that there was a greater notification of cases in 2018, representing 24.19% cases recorded in the period. So, in years from 2014 to 2015 had an increase 3.08% of cases, in 2015 to 2016 4.56%, in the period from 2016 to 2017 with 7.95% cases and in the year from 2017 to 2018 with 9.14% of cases.

Table 1 - Distribution of SC cases in children under one year old, registered with SINAN. Brazil. 2014-2018.

Variable	N	%
UNDER ONE YEAR		
2014	16.311	15,05
2015	19.647	18,13
2016	21.254	19,62
2017	24.933	23,01
2018	26.219	24,19
Total	108.364	100

Source: Research data (2019).

Regarding the characteristics of maternal conditions (Table 2) greater number of cases among the age group of 20 to 29 years, corresponding to 57,431 (52.82%) of the cases. As for the variable maternal schooling, 25,830

(23.75%) were between the 5th and 8th grades incomplete. In relation to race/color, there is a predominance of brown race with 101,759 (48.44%) cases.

Table 2 - Sociodemographic data of pregnant women notified with SC. Brazil. 2014-2018.

Variable	N	%
MATERNAL AGE GROUP		
10-14 years	1.016	0,95
15-19 years	25.692	23,63
20-29 years	57.431	52,82
30-39 years	19.937	18,33
40 years or more	2.059	1,89
Ignored	2.589	2,38
Total	108.721	100

SCHOOLING		
Illiterate	735	0,67
Incomplete 1st to 4th grade	5.481	5,04
Complete 4th grade	3.629	3,33
Incomplete 5th to 8th grade	25,830	23,75
Complete Elementary School	11.178	10,29
Incomplete High School	13.222	12,18
Complete High School	16.178	14,88
Incomplete College Education	1.027	0,96
Complete College Education	865	0,75

Not Applicable	525	0,49
Ignored	30.051	27,64
Total	108.721	100

RACE/COLOR		
White	63.099	30,03
Black	26.071	12,42
Yellow	1.851	0,89
Brown	101.759	48,44
Indigenous	1.201	0,58
Ignored	16.076	7,65
Total	210.057	100
Source: Research data (2019).		

As for the performance of prenatal care pregnant women whose newborns had the diagnosis of congenital syphilis, it was observed 87,428 (80.41%) received prenatal care. Regarding the moment of diagnosis, during prenatal care with 59,881 (55.07%) of cases. Regarding the

treatment regimen was inadequate with 61,959 (56.98%) notified cases. As for the sexual partner 65,341 (60.09%) did not undergo treatment concomitantly with the pregnant woman. It is worth mentioning that 23.33% did not receive due filling in the treatment variable partner (Table 3).

Table 3 - Assistance to pregnant women notified with SC. Brazil. 2014-2018.

Variable	N	%
Yes	87.428	80,41
No	15.359	14,13
Ignored	5.934	5,46
Total	108.721	100

MOMENT OF DIAGNOSIS		
Prenatal	59.881	55,07

Childbirth/Curettage	35.585	32,73
After Childbirth	7.943	7,30
Unrealized	684	0,64
Ignored	4.628	4,26
Total	108.721	100
MATERNAL TREATMENT SCHEDULE		
Appropriate	4.840	4,46
Unappropriate	61.959	56,98
Unrealized	28.955	26,63
Ignored	12.967	11,93
Total	108.721	100
PARTNER TREATMENT		
Yes	18.015	16,57
No	65.341	60,09
Ignored	25.365	23,34
Total	108.721	100
Source: Research data (2019).		

Regarding the characteristics of children notified with SC (Table 4) were greater numbers

of cases were children under 7 days old with 104,933 (96.53%) of the cases.

Table 4 - Distribution of the number of children diagnosed with SC, according to the age group age. Brazil. 2014- 2018.

Variable	N	%
UNDER 7 DAYS TO 12 YEARS		
Less than 7 days	104.933	96,53
7 to 27 days	1.771	1,64
28 to 364 days	1.660	1,51
1 year	151	0,11
2 to 4 years	95	0,08

5 to 12 years	68	0,06
Ignored	24	0,02
Total	108.702	100
Source: Research data (2019).		

Deaths due to SC in children under one year old in Brazil (Table 5) The data show that

there was an increase in the number of cases in 2018 with 241 (22.54%) deaths reported.

Table 5 - Deaths caused by SC in children under one year old. Brazil. 2014-2018.

Variables	N	%
DEATHS IN CHILDREN UNDER ONE YEAR		
2014	176	16,47
2015	235	21,98
2016	195	18,25
2017	222	20,76
2018	241	22,54
Total	1.069	100
Source: Research data (2019).		

DISCUSSION

The research result showed a significant increase in reported cases, with evolution of these numbers over the years studied: in 2014, they were notified 15.04% (16,311) of cases, in 2015 18.13% (19,647); in 2016 19.61% (21,254); in 2017 23% (24,933) and in 2018 24,19% (26,219) cases of SC. The growing number of cases may be related to some factors, such as: inadequate treatment, treatment of unfulfilled partner and maternal education which can interfere with

the adherence of pregnant women to the treatment ⁽⁸⁾.

The increase in the number of syphilis cases notified year by year in the country demonstrates the need for development effective actions aimed at its control, as well as health education for the population, since it is a disease totally preventable, as long as the diagnosis is made early and establishing appropriate treatment for the pregnant woman and her partner ⁽⁹⁾.

With regard to the profile of pregnant women, there was a predominance of women aged 20 to 29 with 52.82% probably because it is the most active phase of sexual life. Such fact can be justified by this stage understanding the peak of the reproductive period of women, which represents a greater number of pregnant women; thus highlighting the importance of the greatest performance of fast test campaigns, both for women and for their sexual partners ⁽¹⁰⁾.

Regarding the maternal education variable 23.75% of pregnant women were between the 5th and 8th incomplete series. These series are believed to be evidenced by virtue of most of the Brazilian women meeting occupied with other activities, without studying or qualifying and for that failure they fail complete basic education, since from the seniority there is a gap in access to education for women, putting them in disadvantaged positions in society ⁽¹¹⁾.

Low maternal education is considered a marker of greater risk for exposure to sexually transmitted infections communicable diseases due to a limited understanding of the importance of prevention, as it is correlated to a cultural design and conducts related to health care ⁽¹⁰⁾.

Although it is not a disease restricted to less favored layers, these results indicate that little education and low income can be influencers of this pathology, for those who have little access to services of health.

Consequently, inadequate prenatal care contributes to persistence vertical transmission of syphilis in this population ⁽⁸⁾.

When analyzing data referring to education of pregnant women draws attention to the high under-registration of this information, which correspond to 27.64% of the cases the absence filling this field makes it difficult to more detailed profile analysis epidemiological profile of this population. Correct data filling contributes to a better standardization of process in order to minimize errors found and the establishment of actions aimed at reducing SC cases ⁽¹²⁾.

Regarding race/color, it was observed that most women were brown with 48.44% of cases, possibly due to Brazilian miscegenation because Brazil is a country formed by the joining of several races. Beyond addition, there is also racial self-declaration where most people refer to as brown skin, as well as the issue of vulnerability social networks ⁽¹³⁾.

It is also noted that the majority of pregnant women received prenatal care 80.41% and had been diagnosed with Syphilis during that period, however the number of the cases that were diagnosed during delivery and curettage drew attention. Studies also show the importance of assistance quality prenatal care with early diagnosis syphilis in pregnant women and highlight consequences of inadequate treatment of the morbidity and mortality of children ⁽⁹⁾.

The analysis of this variable (moment of diagnosis) prompts questions about the quality of prenatal care that is being offered to the population. Possibly, these pregnant women have little access to information on the prevention of Syphilis and, if they are diagnosed with the disease, unaware of the consequences of transmission vertically and the importance of treatment appropriate, including the treatment of partner(s) ⁽¹⁴⁾.

Regarding the treatment regimen maternal was inadequate with 56.98%. The therapy is said to be inadequate when the pregnant woman does not complete the treatment 30 days before delivery and/or the partner was not treated ⁽¹⁵⁾.

Inadequate treatment of CS can be related to an objection to the use of penicillin by health professionals in basic units. In addition to a possible lack of raw material to produce the medication in the MY 2015 ⁽¹⁶⁾. Ministerial Ordinance No. 3,161, of December 27, 2011 instituted and reinforced mandatory administration of penicillin by primary care professionals as the only viable option for the treatment of syphilis in pregnant women, but this resistance to applying medication in basic health units still exists ⁽¹⁶⁾.

Penicillin is the medication of major choice against syphilis. In Brazil in the last years there was an absence of raw material for its production, so as a precaution the

government in 2015, published the note technical 109/2015 in order to guarantee the of syphilis in pregnant women and children with syphilis advocating the exclusive use of penicillin for pregnant women with syphilis and for children with congenital syphilis ⁽¹⁵⁾.

As for the sexual partner, 60.09% did not perform the treatment concomitantly with pregnant women. It is suggested that this finding be virtue of the non insertion of man in the prenatal care. Despite the health professional explaining to the pregnant woman importance and the need for treatment of a partner to prevent reinfection is unknown if the partner adopts the oriented conduct and the treatment along with it. To decrease the inadequate treatment index of the partner, the Ministry of Health implemented the partner's prenatal strategy that allows the entry of men in the basic health service, enjoying presence in prenatal consultations for make routine exams and tests available quick, asking to participate in the educational activities and the exercise of conscious paternity, bringing the comprehensive care for this population ⁽¹⁷⁾.

Early detection of syphilis as well as the insertion of the father during the prenatal consultations, favors the bond of the trinomial (mother-child-father). And the study shows that not participation in this process leads to the treatment not carried out, leading to risk of reinfection, which increases the probability of vertical transmission of disease ⁽¹⁸⁾.

Higher numbers were found of SC cases in children younger than 7 days with 96.53% of the cases. This is suggested due to discovery of SC occurred at the time of delivery and the newborn is still in the hospital to do the complete treatment schedule (7 to 10 days). Thus, the late diagnosis implies a possible failure in assistance to pregnant women, because without the proper yourself and your partner there is an infection fetus ⁽¹⁹⁾.

Research data shows that there was a greater number of notifications of deaths in children under 1 year of age 2018 with 22.54% of cases. It is believed that the increase in notifications is what causes this year to have visibility within the years studied as a highlight. The occurrence of deaths from congenital syphilis may be indicative failure during prenatal care, as it is a pathology that can be preventable as long as the pregnant woman is diagnosed and treated as like your sexual partners before you take damage to the newborn ⁽²⁰⁾.

CONCLUSION

The study showed the prevalence by women aged 20 to 29 years, with incomplete elementary school and mixed race. The diagnosis was made at the time of prenatal care and in relation to maternal treatment, the same was inappropriate and that of the sexual partner was not accomplished. The research

shows that the age predominated in relation to the characteristics of children affected by SC was under 7 days, and 2018 was the year with the highest notification of death in children under 1 year with the disease. In this way, the relief of some weak points of assistance and prevention of syphilis: inadequate treatment of pregnant women and failure to undergo treatment for partners. These results are relevant to the as they denote the need for implementation of actions aimed at reduction in the number of congenital syphilis in parents.

Thus, it is essential to evaluate the quality of assistance that has been provided, given that, in most countries, observed cases, mothers performed consultations during this period. It is also done necessary to intensify mechanisms that seek to integrate the partner into the period pregnancy and, consequently, favor their adherence to the proposed treatment for cases diagnosed as positive. Such actions can contribute to coping with this serious public health problem.

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