



RESEARCH ARTICLE

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PREVALENCE OF CONGENITAL SYPHILIS IN THE PERIOD OF 2018 TO 2019 IN AN INNER CITY OF BAHIA

¹Leticia Ferreira Martins, ¹Victória Silva Midlej Ribeiro, ²Gildásio Oliveira Araújo, ³Iaggo Raphael David Dantas dos Santos and ¹Matheus Santos Marques

¹Universitary Center of Technology and Science (UniFTC)

²Public Health Research and Extension Institute (INPES)

³Center of Education and Research and Extension in Chronic Disease (NEPEdc)

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*Corresponding author:

Leticia Ferreira Martins

ABSTRACT

The syphilis is responsible to affect one million pregnant worldwide leading to 300.000 neonatal and fetal deaths and endangering of premature death more than 200.000 children in the world. The syphilis is a sexually transmitted disease of compulsory notification and has systematic character caused by the gram negative *Treponema pallidum* bacterium and your congenital type is characterized by hematogenous spread of this bacterium from the non-treated pregnant by transplacental via and lead to numerous consequences as spontaneous abortion, intrauterine death. The objective of the study is to identify the prevalence of congenital syphilis in the period of 2018 to 2019 in an inner city of Bahia. It is a transversal, descriptive, quantitative study that was realized in 63 compulsory notified files of Esau Matos Hospital being collected data as age, education level, prenatal care, diagnose and treatment. It was verified the decrease in the congenital syphilis cases, neonate deaths and increase in the prenatal and treatment.

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INTRODUCTION

Worldwide, in 2010, The World Health Organization estimated the occurrence of 11 millions new cases of syphilis per year being two million cases in pregnant women which only 10% of these cases are diagnosed and treated (Dantas et al, 2018). In Brazil, according to the data of the Syphilis Epidemiological Register, comparing the year of 2018 with 2016, there was an increase of 28,5% in the pregnant detection rate, the incidence of congenital syphilis rises 16,4%, the syphilis death were 206 cases for 1.000 born alive in 2017 versus 195 cases in 2016 (BRASIL, 2018). The congenital syphilis is characterized by the hematogenous spread of *Treponema pallidum* from the non treated or inappropriately treated pregnant to her conceptus by transplacental via and can lead to several consequences as spontaneous abortion, intrauterine death, bone malformation, nonimmune hydrops, stillbirth (Cooper; Sánchez, 2018). The principal factors that can interfere in the increase of this harm are: lack of solicitation of serological examination (VDRL) to the pregnant during the prenatal; absence of attendance from the

responsible department; need to inclusion of the partner in the treatment after the exam confirmation; preservative use reduction; low socioeconomic level (Vargas et al, 2018). All pregnant women should had a early screening to detection and immediate adequate treatment to reduce the risk of transmission from mother to child (Simms et al, 2018). The partial or no prenatal care are positively associated with risk of infection and the associated stigma and discrimination related to sexually transmitted infections difficult the seek by the woman at risk by adequate prenatal care contributing with missed diagnostic and curative treatment what leads to mortality and morbidity risks (Rowe et al, 2018). The treatment of mother is important and can be realized through antibiotic therapies with benzathine penicillin, procaine penicillin, azithromycin or ceftriaxone (Plotzker et al, 2018). Although prevention still is the best management and decrease the economic costs associated with the treatment of mother and child as well as the psychological, social and emotional sequels in the contaminated families (Serruya et al, 2015). To prevent mother-to-child transmission is necessary and prenatal test and the immediate treatment with injection of benzathine penicillin

and the mother infection can be avoid with the use of preservative protection (Korenromp *et al*, 2019). The notification of congenital syphilis is important once it possibilites the intervention of health services to reduce the mother-to-child transmtion through the adequate diagnose and treatment being a low number not indicative of a good program but a sub-notification as well as a high rate can show failures in the process and interventions opportunities loss (Domingues; Leal, 2016). Thus, the present study aimed to identify the prevalence of congenital syphilis in the period of 2018 to 2019 in a city of South-west of Bahia through the notification files of a hospital to verify the neonate mortality and profile of the infected pregnants.

MATERIAL AND METHODS

It was realized a transversal, descriptive, quantitative and retrospective study to identify the prevalence of congenital syphilis in the period of 2018 to 2019 in a city of Bahia. To develop the study, it was submitted to the Ethic Committee of Public Fundation of Health of Vitoria da Conquista, Bahia, Brasil and it was approved with the parecer 3.753.657. The data collect was realized through the availability of the compulsory files notification from the period of january 2018 until august 2019 provided by the health information system and epidemiological vigilance of the hospital. It was included in the present study, the file of infected pregnant, living in Vitoria da Conqusita, Bahia, Brasil or town, that searched the hospital to attendance and excluded all pregnants from others cities and incomplete files. Through the notification files analysis, it was possible to observe the diagnosed pregnant profile, as age range, education level, prenatal realization, diagnose moment, if after diagnose, the treatment was initiated, if the treatment was adequate or inadequate and the death newborn number. After the obtaining, the data was process in the Excel 2010 and analyzed in the Epi Info version 7.2 to identify the frequencies, means and pattern standart.

RESULTS AND DISCUSSION

From 2018 to 2019 it was realized 63 congenital syphilis notification in Esau Matos Hospital. The age mean of the notified pregnant was 26,26 (\pm 7,09) years. The most prevalent age range was 15-20 years with 23,81% what demonstrate an increase in adolescent pregnant women evidencing an early active sexual life without protection that can contribute to study interruption. It is necessary to stimulate the preservative use and promote sexual education to this public to avoid this scenario (WARLEI *et al*, 2016). This value is superior to one found by Domingues and Leal (2016) of 80% in the age range of 20-34 years in 23.894 pregnants in the national study of Birth. It was observed that majority of the congenital syphilis pregnant (34,92%) had low education level what explained the high prevalence because this level of education affect the understanding about the disease and the importance of sexually transmitted diseases (Sousa *et al*, 2019). About the region which the pregnant lived, 80,85% were from urban district, 4,76% peri urban and e 14,29% rural what corroborates with Kanai *et al* (2018) that observed that majority of congenital syphilis cases in Japan occurred in urban area. This can be explained by the difficult of the women living in the rural region to access the medical care what can lead to a sub notification and difficulty to have the exam. The data can be better visualized in table 1.

Tabela 1. Sample Characterization

Age Range	n	%
≤ 15	2	3,17
15-20	15	23,81
20-25	14	22,22
25-30	12	19,05
30-35	12	19,05
35-40	7	11,11
40,45	1	1,59
Total	63	100
Education Level		
Incomplete Primary	5	7,94
Incomplete Elementary School	22	34,92
Complete Elementary School	5	7,94
Incomplete High School	8	12,70
Complete High School	12	19,05
Incomplete College	1	1,59
No answered	10	15,87
Total	63	100,1
Area		
Urban	51	80,95
Periurban	3	4,76
Rural	9	14,29
Total	63	100

From the studied sample, 74,60% realized prenatal similar to 80% found by Serruya *et al* (2015) in a study that analyzed data from several sources of syphilis register in Latin America. The prenatal care is important to decrease the incidence of congenital syphilis once it promotes the early identification and treatment of mother and neonate reducing the long-term sequels in this population (Rowe *et al*, 2018). With regard to diagnose, 47,62% occurred in prenatal. According the Disease Center of Control and Prevencion, the prenatal screening contribute to the early diagnose in 120 days, provides serological exams, pregnant attendance and fast test realization which promotes the early treatment of the pregnant and partner aiming to reduce the chances of transmtion to the fetus and to ensure a health birth is needd to realize at least 6 consultations (LEAL *et al*, 2015). About the neonates, 66,67% survived and 33,33% went to death. Superior value to the showed by Korenromp *et al* (2019) of 9%. Even with the majority of studied pregnants realizing the prenatal, the number of dead neonates was high. This can be explained because they no realized the adequate treatment and initiated the early treatment before the birth or right after that, what rises the chance of intrauterine death. Considering the adequate treatment, 52,38% of the sample realize it. The data can be better analyzed in Table 2.

Table 2. Disease attendance data

Prenatal	n	%
No	9	14,29
Yes	47	74,60
No answer	7	11,11
Total	63	100
Diagnose of mother		
Previous pregnancy	8	12,70
Prenatal	30	47,62
Birth	19	30,16
No answer	6	9,52
Total	63	100
Neonate		
Dead	21	33,33
Alive	42	66,67
Total	63	100
Treatment		
Adequate	33	52,38
Inadequate	10	15,87
Not realized	20	31,75
Total	72	100

In the last survey realized by the municipal health secretary through the epidemiological surveillance showed a decrease in congenital syphilis case being 2019 of 1,42% lower than 3,8% of 2018. Inferior value compared to the one found by Vargas *et al* (2018) of 3,7% in the public maternity hospitals of Salvador, Bahia, Brasil and 3,0% showed by Enkhat *et al* (2018) in a screening of 1997 to 2016 from the data of Antenatal Care (ANC). However, the value was similar to found by Dantas *et al* (2018) in a study following 15 years of publications about syphilis in Brazil that showed values between 1,02 and 1,9%. Lastly, it is fundamental that all syphilis case be notified to the Information System of Notification Grievances to occur the screening to help in the health planing aiming to improve the strategies and interventions to epidemiologically reduce the congenital syphilis (WARLEI *et al*, 2016).

Final Considerations

It was possible to observe a decrease in congenital syphilis cases and stillbirth in the periodo of january of 2018 to august of 2019, as a high number of pregnant that realized the prenatal care and were diagnosed during the screening. This shows that this attendance is very important to early diagnose of congenital syphilis. The most prevalent women was that in the age range was 15 to 20 years, with incomplete elementary school, peripheral area habitants and that did not know the disease. It is necessaru that the health primary attention continues to invest in this public, investing in preventive awareness campaigns as the importance of protect sexual act and early adequate treatment.

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