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Congenital Syphilis: The Profile Analysis among Postpartum Women in Brazil

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Abstract

Congenital Syphilis (SC) is an infection with serious consequences that increased in recent decades in Brazil.

Aim: To analyze the socio-demographic and obstetrics profiles among women with new-born babies diagnosed with congenital syphilis in a maternity hospital in Salvador, Bahia, Brazil.

Method: A case-control study, exploratory, using a quantitative approach. Twenty-seven women after delivery were interviewed during the period from July to September 2015.

Results: Of the 27 women, 70% are between 19 and 35 years of age, 67% had between 9-12 years of study, were housewives (74%), 70% reported brown colour, were single (56%), 78% reported two or more previous pregnancies, 93% had had appointment at prenatal care program in their current pregnancy, more than 52% attended 4 follow-up, 56% started this follow up in the second quarter, 78% had vaginal delivery, were 59% diagnosed with syphilis during the prenatal care, 68% received treatment, 85% have partners not treated.

Conclusion: Most women whose new-borns were diagnosed with congenital syphilis had been at a prenatal care program, when she was diagnosed and treated. However, the majority of their partners did not treat. Faced with the failure of treatment of syphilis during pregnancy, more effective actions are needed to improve the quality of prenatal care, in order to prevent congenital syphilis.

Keywords: Congenital syphilis; Syphilis; *Treponema pallidum*; Prenatal care

Introduction

Congenital Syphilis (CS) is a disease with serious consequences the newborn, which has experienced a resurgence in recent decades [1]. It is a bacterial infection transmitted by *Treponema pallidum*, acquired by the fetus, placental via infected pregnant women, untreated or inadequately treated at any point in pregnancy [2].

In recent years there has been an increase in the incidence and prevalence of syphilis among pregnant women, especially in developing countries [3]. According to the World Health Organization (WHO), each year, syphilis in pregnancy results in approximately 300,000 fetal and neonatal deaths and 215,000 newborns (NW) at the risk of birth and/or premature death [2]. In Brazil, a considerable increase in syphilis notification in pregnant women has been observed in the past decade, representing a threat to maternal and fetal health [4].

In 1986, SC was established as a compulsory notification disease in Brazil [5]. In 1993, the Ministry of Health (MH) proposed a new project, implementing a country's disease control actions such as the care of pregnant women, performing fast-hospital test, clinical management and surveillance for infected woman during labor and child exposed to the disease, aiming the prevention of new cases in women of childbearing age and reduction in vertical transmission of syphilis [6].

Although syphilis is a well-defined disease, easily diagnosed and with a low-cost treatment, disability prenatal monitoring is considered one of the main factors responsible for the cases of SC [7]. Lack or inadequate treatment of partners enables maternal reinfection, leading to invalidation of treatment, even for women who do not perform properly or intimelyone.

According to MH, from 2005 to 2010, 39,789 cases of syphilis in pregnant women and 36,000 cases of SC were reported in Brazil, with a concentration of cases in the Northeast region. Recently published data show, that from 2011 to 2016, there was an increase in the number of cases of syphilis in pregnant women in Brazil (129,757 cases), indicating an improvement in the system epidemiological surveillance and a possible expansion in access to diagnosis [8].

So, the knowledge of socio-demographic and obstetrical profile of women whose newborn was diagnosed with syphilis is necessary. It could collaborate on the development of strategies to facilitate early detection and intervention required, thus reducing the large number of maternal and neonatal complications.

This study aims to analyze the socio-demographic and obstetric profile of mothers whose NW's were diagnosed with SC in a reference maternity in the city of Salvador, Bahia, Brazil.

Methods

This is an observational study, descriptive and exploratory with

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quantitative approach, performed in a reference maternity school in treatment of SC in the city of Salvador, Bahia, Brazil. The study included mothers with Venereal Disease Research Laboratory (VDRL) reagent, in any degree and were accompanying set in NW's accommodation units for performing the treatment of SC. The study period was from July to September 2015. Exclusion criterion were postpartum women with hearing disabilities, unable to respond the search.

The researchers performed weekly visits to detention facilities and after identification of women who met the inclusion criteria, requested the permission to conduct the survey, explaining the objectives and the importance of this study. After acceptance, with signing the Informed Consent, patients underwent a structured interview with questions drawn up by the researchers themselves. The instrument had seventeen objective questions which contemplated sociodemographic and current obstetric data and were applied in reserved place ensuring the confidentiality and other commitments made in the consent form.

The following sociodemographic characteristics were analyzed: Age, education level, skin color, marital status, nationality and profession. Previous obstetric characteristics: Number of pregnancies, deliveries and completion of prenatal care program. Related to the current pregnancy, the mothers were questioned regarding the achievement of the pre-natal care, the number of visits, gestational age that began follow-up, when she received the diagnosis, implementation and completion of treatment within thirty days before delivery (postpartum and partner) and the type of delivery.

The study was approved by the Ethics Committee of the Universidade Salvador-UNIFACS, which opinion No. 1,139,803/2015. Data were analyzed and presented in the form of tables through relative and absolute frequency distribution with calculations of their percentage from the Statistical Package for Social Sciences (SPSS) version 19.

Results

Twenty-seven women were interviewed. Of mothers who had the inclusion criteria for research and who were hospitalized in the period of data collection, all decided to participate in the research.

Table 1 describes the sociodemographic variables of the participants

Variables	n=27	%
Age group (years)		
<19	3	11.1
>19-35	19	70.4
35	5	18.5
Years study		
9-12	9	66.6
>12 years	5	33.4
Profession		
Housewife	20	74.1
Other	7	25.9
Ethnicity		
White	1	3.7
Brown	19	70.4
Black	6	22.2
Indigenous	1	3.7
Marital status		
Single	15	55.6
Married/stable Union	11	40.7
Widow	1	3.7

Table 1: Profile of socio-demographic postpartum women in the maternity hospital Salvador, Bahia, Brazil-2015.

Variables	n=27	%
Number of previous pregnancies (n=27)*		
1	4	22.2
>2	14	77.7
Prenatal performed in the previous pregnancy (n=27)*		
Yes	16	88.8
No	2	11.1
Attended prenatal care program		
Yes	25	92.6
No	2	7.4
Number of follow-up (n=27)**		
1-3	4	16
4-6	13	52
>6	8	32
Trimester began prenatal		
First	9	36
Second	14	56
Third	2	8
Delivery route		
Natural	21	77.8
Cesarean	6	22.2

*Child women only
**Women have the number of consultations is not having done the prenatal care

Table 2: Obstetric profile of mothers attended at one maternity hospital of Salvador, Bahia, Brazil-2015.

of this study, in the item referring to the age group, 70% of patients had between 19 and 35 years old. As for education, approximately 67% had studied between nine and twelve years. On being asked about his profession, 74% reported they were housewives and only 26% developed other work activities. It was also observed that 70% of respondents said they were brown skin colour. About marital status, 56% reported being single (Table 1).

Table 2 shows data for the obstetric profile of previous and present pregnancy. By analyzing the current obstetric data, 7% of women reported not having conducted any prenatal follow-up, one by prison situation and the other did not report the reasons for not monitoring (Table 2).

The data relating the variables related to time of diagnosis of syphilis, completion of treatment of the mother and partner and the end of treatment up to 30 days before delivery, are represented in Table 3.

Discussion

The results of this study show a series of failures in syphilis control actions, in this group of women. The information collected showed that although most pregnant women did a prenatal care program, the number of follow-up was insufficient, the beginning of prenatal care was late and the partner was not treated for syphilis.

In Brazil, despite the increasing coverage of prenatal care from the 90s, only one fifth of women receive proper care as the MH protocol [9]. The less access to prenatal care for vulnerable groups, with similar characteristics to those found in this study as: low education, house workers, brown/black color skin and residents in the North and Northeast regions, demonstrate the persistence of social inequalities in access to health services in Brazil [10].

Concerning the marital status of the patients studied, it is observed that 57% said the lack of steady partner, which denotes an active sex life with more likely to get a sexually transmitted infection. Possibly one of

Variables	n=27	%
Moment diagnosis		
Prenatal	16	59.3
Childbirth	4	14.8
After childbirth	1	3.7
Had prior knowledge of the pregnancy	6	2.2
Received treatment		
Yes	17	68
No	8	32
Treatment within 30 days before delivery*		
Yes	13	48.1
No	14	51.9
Partner received treatment in the same period the patient		
Yes	4	14.8
No	23	85.2
Moment diagnosis		
Prenatal	16	59.3
Childbirth	4	14.8
After childbirth	1	3.7

*The two mothers who reported not having performed prenatal, included among those who were did not complete the treatment within 30 days before delivery

Table 3: Variables related to the time of diagnosis completion of treatment of the mother and partner and the end of treatment within 30 days before parturition in a maternity hospital in Salvador, Bahia, Brazil-2015.

the determining factors for the perpetuation of the infection is the lack of condom use. Such practices imply the quality of care and the injury inevitably caused by the infection.

It should be emphasized that the socio-economic conditions point to the severity related to SC. In addition, it is believed that mothers with higher socioeconomic vulnerability tend not to adhere to the prenatal care program, among the reasons may be cited the lack of financial resources for the use of public transportation to the health units, the lack of partner in the operation of monitoring and little knowledge about the possible health problems related to lack of prenatal care [10].

Araújo study found that among the main factors that express failures in the clinical management of syphilis include: Lack of exams for diagnosis in timely, errors in serological tests of interpretations and absence or insufficient time to treatment appropriate the woman and her partner, which determines a high risk of vertical transmission of the disease [11]. Even if the mother is treated properly, the absence of treatment of sexual partner also implies a high risk of reinfection of pregnant women, as evidenced in our data [12]. Every pregnant woman should carry out at least two tests VDRL during pregnancy in the first and third trimester and another test at birth, in order to track possible reinfection [2].

Through the examinations in prenatal screening can identify and minimize issues that may affect maternal and child health, from an examination of high sensitivity, low cost and essential for the prevention of SC [9]. However, it is assumed through the results of this study that there was a weakness found during prenatal care program, especially for performance and interpretation of serological tests for syphilis. In case of a sexually transmitted infection associated, this condition worsens because of the possibility of vertical transmission. The frequency of the transmission is higher in late gestation, but the severity of fetal complications is higher at the beginning, whereas SC is associated with irreversible and long-term sequelae such as deafness, blindness and neurological diseases system [13].

In this way it is observed the violation of parameters set out in the guidelines for obstetric and neonatal care of MH, which recommends that the prenatal care includes in its quantity and quality a number of consultations and that meets 100% of pregnant women since the beginning of pregnancy (<12 weeks gestational age), doing at least six visits and offering the care of laboratory basics among them, the VDRL test. The demand and supply of services of antenatal care may modify the outcome of pregnancy and when absent increase the chances of perinatal mortality [14].

Although MH east on the complete coverage of prenatal care before the 12th week pregnancy, this study showed that 7% of respondents did not carry out any consultation, and more than half started tracking in the second trimester, reflecting a delayed capture pregnant by the health unit. The nonoccurrence of early identification of pregnant women to prenatal diagnosis entails and consequently, delayed treatment for syphilis. It is known that the proper treatment with benzathine penicillin is able to prevent 97% of cases of vertical transmission. And the best results are achieved when treatment is performed between the 24th to 28th gestational weeks [15]. This research has shown that almost 60% of women had the disease diagnosed and underwent treatment during follow up, only half the sample completed with less than 30 days before delivery.

Another factor that suggests an inappropriate treatment was the lack of antibiotics in networks of health, due to problems in the supply of raw material and the solvent for the manufacture of penicillin in the second half of 2014, reflecting the non-adherence and increased incidence of congenital syphilis in Brazil [12]. The antibiotic is produced in Brazilian laboratories, but the raw material is imported and was in foul. With the shortage in the country suffered the MH established priority treatment pregnant women with syphilis and their NW´s since penicillin is the drug of choice to treat syphilis and only drug able to cross the barrier hematoplacentária [16].

The lack of treatment in 85% of partners in this study points to another major flaw in the treatment of pregnant women, finding similar to previous study [17]. The inclusion of the partner in prenatal care, the male prenatal called, is a strategy for addressing the problem, as the partner treatment is crucial and effective for the mother of healing and consequently reducing SC [4]. The MH determines that the partner processing is carried out even in the impossibility of performing its diagnostics and laboratory examination even get negative [5]. The lack of treatment is a major constraint for the control of SC [17].

Sarcenie highlights the difficulty in leveraging partner during the antenatal care and it is very important to understand the factors that hinder the acceptance of these individuals [18]. The downtime, lack of understanding of the pathology that at certain stages has no symptoms and the no acceptance of being carrier of the disease are factors that hinder access to health units. Thus it is necessary to active search of cases and the development of actions to facilitate the capture of the companion in order to establish clarification of the existing potential complications for mother and child health.

With respect to early prenatal period, in studies conducted east in South and Brazil, resulting also demonstrated similar to the findings of this study demonstrated that 60% of women began prenatal the second trimester [9,19,20]. According to Lazarini and Barbosa [9] and Moreira et al. [19] this finding suggests flaws in assistance to prenatal care, which despite increased coverage can be associated with deficiency in the number of health professionals trained and updated in the clinical management of syphilis, being relevant factor in the persistence of

high SC rates in these regions. Although 92% of women reporting the realization of prenatal care, only 59% had diagnosis of syphilis during this period, 51% completed treatment 30 days before delivery and only 15% of partners received the treatment.

Although it is a condition in which the etiological agent and transmission methods are known, in addition to treatment have a high cure rate, the incidence of syphilis remains high [21]. Thus it is made fundamentally important planning actions aimed at health education, guidance on methods of disease prevention and treatment to reduce the possible complications also emphasizes the need for development of disease to combat strategies aimed at early identification of pregnant women in primary care network health, starting prenatal care in the first trimester of pregnancy, carrying out the serological tests still in this period, guaranteeing early diagnosis and appropriate treatment the woman and her partner.

Design by harvesting the information at one time, study the cases from an interview may result in the loss of important information related to assistance from prenatal care. As failure of our study, there is the interview by 03 interviewers. Although trained, it is known that this aspect can influence the data collection. Knowing these aspects, there is a need for further studies with different methodologies on the subject, to better characterize these women and identification of gaps in the health system. Moreover, it is a study in one institution, with a small sample size and its generalization cannot be true. It is noteworthy that it is a state of Bahia reference institution.

Conclusion

Most women whose new-born were diagnosed with congenital syphilis had been at a prenatal care program, when she was diagnosed and treated. Faced with the failure of treatment of syphilis during pregnancy, more effective actions are needed to improve the quality of prenatal care, in order to prevent congenital syphilis. Moreover, it is a study in one institution, with a small sample size and its generalization cannot be true. However, it is assumed through the results of this study that there was a weakness found during prenatal care program, especially for performance and interpretation of serological tests for syphilis.

References

1. Dalle J, Baumgarten VZ, Ramos MC, Jimenez MF, Acosta LC, et al. (2016) Maternal syphilis and accomplishing sexual partner treatment: Still a huge gap. Int J STD AIDS.
2. BRASIL (2015) Comissão Nacional de Incorporação de Tecnologias do SUS (CONITEC). Protocolo clínico e diretrizes terapêuticas infecções sexualmente transmissíveis. Brasília: Ministério da saúde.
3. Lawn EJ, Blencowe H, Waiswa P, Amouzou A, Mathers C, et al. (2016) Still-births: Rates, risk factors and acceleration towards 2030. Lancet 387: 587-603.
4. Domingues RMSM, Szwarcwald CL, Souza Junior PRB, Leal MC (2014) Prevalência de sífilis na gestação e testagem pré-natal: Estudo nascer no brasil. Rev Saúde Pública 48: 766-774.
5. BRASIL (2006) Secretaria de vigilância em saúde, programa nacional de DST e AIDS. Diretrizes para controle da sífilis congênita: Manual de bolso. 2nd Edtn. Brasília: Ministério da saúde.
6. BRASIL (2003) Secretaria-executiva programa nacional de DST e Aids. Projeto nascer. Brasília: Ministério da saúde.
7. Araújo EC, Moura EFA, Ramos FLP, Holanda VGDA (1999) Sífilis congênita: Incidência em recém-nascidos. J Pediatria 75: 119-125.
8. BRASIL (2016) Secretaria de vigilância em saúde-departamento de vigilância, prevenção e controle das IST, do HIV/Aids e das hepatites virais. Boletim Epidemiológico.
9. Lazarini FM, Barbosa DA (2017) Educational intervention in primary care for the prevention of congenital syphilis. Rev Latino-Am Enfermagem 25: e2845.
10. Domingues RMSM, Viellas EF, Dias MAB, Torres JA, Theme-Filha MM, et al. (2015) Adequação da assistência pré-natal segundo as características maternas no Brasil. Rev Panam Salud Publica 37: 140-147.
11. Viellas EF, Domingues RMSM, Dias MAB, Gama SGN, Filha MMT, et al. (2014) Assistência pré-natal no Brasil. Cad Saúde Pública.
12. Araújo EC, Costa KSG, Silva RS, Azevedo VNG, Lima FAS (2006) Importância do pré-natal na prevenção da sífilis congênita. Rev Para Med 20: 47-51.
13. (2015) Secretaria de vigilância em saúde-departamento de DST, AIDS e Hepatites Virais. Boletim Epidemiológico-Sífilis.
14. Desale M, Thinkhamrop J, Lumbiganon P, Qazi S, Anderson J (2016) Ending preventable maternal and newborn deaths due to infection. Best Pract Res Clin Ob Gynaecol 36: 116-130.
15. (2010) Secretaria da Saúde. Atenção à gestante e à puérpera no SUS-SP: Manual técnico do pré-natal e puerpério. Secretaria de estado da saúde de são paulo.
16. Blencowe H, Cousens S, Kamb M, Berman S, Lawn JE (2011) Lives saved tool supplement detection and treatment of syphilis in pregnancy to reduce syphilis related stillbirths and neonatal mortality. BMC Public Health.
17. (2015) Técnicos do Ministério da saúde e parceiros de 21 estados brasileiros se reúnem por videoconferência para divulgar revogação de parecer 08/2014, do Cofen. Prevenção da sífilis, portal sobre Aids, DST e hepatites virais.
18. Magalhães DMS, Kaawaguchi IAL, Dias A, Calderon IMP (2013) Sífilis materna e congênita: Ainda um desafio. Cad. Saúde pública 29: 1109-1120.
19. Moreira KFAM, Oliveira DM, Alencar LN, Cavalcante DFB, Pinheiro AS, et al. (2017) Perfil dos casos notificados de sífilis congênita. Cogitare Enferm 22: e 48949.
20. Santos GC, Paluch LRB, Cerqueira TPS, Passos NCR (2015) Prevalência e fatores associados à sífilis em gestantes atendidas pelo SUS em Município da Bahia. Revista Baiana de Saúde Pública 3: 529-541.
21. Oliveira BCA, Moraes RBA, Álvaro GR, Oliveira BMA, Oliveira BJA, et al. (2016) Syphilis during Pregnancy: A study of 879,831 pregnant women in Brazil. Epidemiology.

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