

ORIGINAL ARTICLE

GESTATIONAL SYPHILIS: REPERCUSSIONS FOR POSTPARTUM WOMEN

Jéssica Gama da Silva¹, Giovana Calcagno Gomes², Juliane Portella Ribeiro³, Bianca Contreira de Jung⁴, Pâmela Kath de Oliveira Nörberg⁵, Marina Soares Mota⁶

ABSTRACT

Objective: To know the repercussions of the diagnosis of Gestational Syphilis for the postpartum woman.

Method: A qualitative research carried out in a pediatric unit of a university hospital in southern Brazil. 15 postpartum women participated of children admitted to the sector diagnosed with congenital syphilis. Data was collected by semi-structured interviews in the first half of 2018 and submitted to content analysis.

Results: Data was obtained about the receipt of the diagnosis, the reactions regarding the diagnosis, the influence of the diagnosis during pregnancy and childbirth and the treatment of gestational syphilis.

Conclusion: Misinformation of the puerperal women regarding syphilis infection, especially regarding care to avoid transmission and reinfection. We highlight the educational role of nurses with these women in the pursuit of reducing (re)infections by syphilis.

DESCRIPTORS: Syphilis serodiagnosis; Transmission of Infectious Disease; Women's Health; Public health; Nursing.


*Article extracted from the master's dissertation "Repercussions of the diagnosis of congenital syphilis in children". Federal University of Rio Grande, 2018.

HOW TO REFERENCE THIS ARTICLE:


Silva JG da, Gomes GC, Ribeiro JP, Jung BC de, Nörberg PK de O, Mota MS. Gestational syphilis: repercussions for postpartum women. *Cogitare enferm.* [Internet]. 2019 [access "insert day, month and year"]; 24. Available at: <http://dx.doi.org/10.5380/ce.v24i0.65578>.





This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).


¹Nurse. Master student in Nursing. Assistant nurse at the Santa Casa de Misericórdia Burn Center of Rio Grande. Rio Grande, RS, Brazil. 

²Nurse. PhD in Nursing. Nursing Graduate Professor at the Federal University of Rio Grande. Rio Grande, RS, Brazil. 

³Nurse. PhD in Nursing. Nursing Professor at the Federal University of Pelotas. Pelotas, RS, Brazil. 

⁴Nurse. Master in Nursing. Preceptor of the Collective Health Center of the Catholic University of Pelotas. Rio Grande, RS, Brazil. 

⁵Nurse. PhD in Nursing. Lecturer at the Federal University of Rio Grande. Rio Grande, RS, Brazil. 

⁶Nurse. PhD in Nursing. Lecturer at the Federal University of Rio Grande. Rio Grande, RS, Brazil. 

SÍFILIS GESTACIONAL: REPERCUSSÕES PARA A PUÉRPERA

RESUMO

Objetivo: conhecer as repercussões do diagnóstico de Sífilis Gestacional para a puérpera.

Método: pesquisa qualitativa realizada em uma unidade de pediatria de um hospital universitário do sul do Brasil. Participaram 15 puérperas de crianças internadas no setor com diagnóstico de Sífilis Congênita. Os dados foram coletados por entrevistas semiestruturadas no primeiro semestre de 2018 e submetidos à análise de conteúdo.

Resultados: obtiveram-se dados acerca do recebimento do diagnóstico, das reações frente ao diagnóstico, da influência do diagnóstico na gestação e parto e da realização do tratamento da Sífilis Gestacional.

Conclusão: verificou-se desinformação das puérperas quanto à infecção da sífilis, principalmente sobre cuidados para evitar a transmissão e a reinfecção. Destaca-se o papel educativo do enfermeiro junto a essas mulheres na busca pela diminuição das (re)infecções por Sífilis.

DESCRITORES: Sorodiagnóstico da Sífilis; Transmissão de Doença Infecciosa; Saúde da Mulher; Saúde Pública; Enfermagem.

SÍFILIS GESTACIONAL: REPERCUSIONES PARA LA PUÉRPERA

RESUMEN

Objetivo: conocer las repercusiones del diagnóstico de Sífilis Gestacional para la puérpera.

Método: investigación cualitativa realizada en una unidad de pediatría de un hospital universitario del sur de Brasil. Participaron 15 puérperas de niños internados en el sector con diagnóstico de Sífilis Congénita. Los datos se recolectaron por medio de entrevistas semiestructuradas durante el primer semestre de 2018 y se los sometió a análisis de contenido.

Resultados: se obtuvieron datos acerca de cómo se recibe el diagnóstico, de las reacciones frente al mismo, de la influencia del diagnóstico en el embarazo y el parto y de la realización del diagnóstico de la Sífilis Gestacional.

Conclusión: se verificó que las puérperas están desinformadas con respecto a la infección de la sífilis, principalmente sobre los cuidados para evitar su transmisión y reinfeción. Se destaca el rol educativo del enfermero junto a estas mujeres en la búsqueda de reducir la cantidad de (re)infecciones por sífilis.

DESCRIPTORES: Serodiagnóstico de la sífilis; Transmisión de una enfermedad infecciosa; Salud de la mujer; Salud pública; Enfermería.

INTRODUCTION

Syphilis is a systemic infection caused by *Treponema pallidum* (T. pallidum), which when not treated early can mainly compromise the nervous and cardiovascular system. It is transmitted predominantly through sexual contact or through the placenta of a pregnant woman to the fetus⁽¹⁻²⁾.

Many people are unaware of the infection and may be contaminated and transmit the disease. This is due to absence or little symptomatology, stage with variable presentations and long latency periods of infection⁽¹⁾. This factor contributes to the low demand for health care by infected women. In addition, late prenatal onset contributes to late diagnosis of Gestational Syphilis and Congenital Syphilis.

In Brazil, the Sentinel Parturients study revealed a seropositivity prevalence of 0.89% for syphilis, corresponding to about 26,700 pregnant women/year⁽³⁾. In another national hospital-based study, these rates are recurrent mainly in women aged 20 to 34 years old, with low education and more socially vulnerable⁽⁴⁾.

The steady increase in the number of syphilis cases in the general population can be attributed to increased testing coverage, reduced condom use, resistance from health professionals in administering Penicillin in Primary Care, worldwide Penicillin shortage, among others. In addition, the improvement of the surveillance system over the years may reflect the increase in reported cases⁽⁵⁾.

During pregnancy, this infection can have serious consequences for the fetus, such as miscarriage, pre-term birth, early or late congenital manifestations and/or newborn death⁽¹⁾. Syphilis in pregnancy causes approximately 300,000 fetal and neonatal deaths/year and puts 215,000 NB at risk of premature death, low birth weight or congenital syphilis⁽⁶⁾.

A research on health knowledge, attitudes, and practices showed that a quarter of the Brazilian population began their sex life before age 15 and another 35% between 15 and 19 years old. Almost 30% of the population aged 15 to 49 reported having multiple partners⁽⁷⁾.

It has been necessary to invest in health education, especially in schools and health facilities at their various levels of care, working closely with projects related to the prevention and promotion of safe sexual practice, avoiding the transmission of Sexually Transmitted Infections (STIs). This political relationship between school and health institutions has been established since 2007 through the School Health Program (Programa de Saúde na Escola, PSE), aimed at interventions to promote health and integral education for children, adolescents and adults in Brazilian public education⁽⁷⁾.

Failures in prenatal and perinatal health education contribute to gestational syphilis remaining a reality in our country. Poor prenatal care can lead to failures in the diagnosis and treatment of pregnant women with syphilis. Diagnosed cases of syphilis need to be properly addressed in health services so that the pregnant woman and her partner are aware of risks and complications related to non-adherence to treatment. In addition, reinfection and new cases can be avoided in the same woman⁽⁵⁾.

The role of nurses in direct contact with patients, rapid tests, identification of signs and symptoms of the disease, follow-up and guidance to the family is highlighted⁽¹⁾.

The nurse acts directly with the mother-baby binomial and their family network against Gestational and Congenital Syphilis, considering the diagnostic and care complexity of the disease⁽⁸⁾. In this context, the question that guided this study was the following: What are the repercussions of the diagnosis of Gestational Syphilis for the postpartum woman? From this, the objective was to know the repercussions of the diagnosis of Gestational Syphilis for the postpartum woman.

METHOD

An exploratory, descriptive research of qualitative nature, performed at the Pediatric Unit (PU) of a Hospital in the South of Brazil (HU). The HU is a reference in maternal and child care. The PU has 21 beds for children between zero and twelve years old, who are hospitalized for both clinical and surgical care.

The study participants were 15 puerperal newborns diagnosed with CS during the data collection period. Inclusion criteria were to be a postpartum child companion during her hospitalization period. Postpartum women under 18 years were excluded.

Data collection was performed from May to July 2018, through a semi-structured, individual interview with each postpartum woman. Those who accepted signed the Free and Informed Consent Form. The mothers were asked about the impact of the diagnosis of Gestational Syphilis and Congenital Syphilis.

To ensure the reliability of the speeches, the interviews were recorded in audio file, with permission and soon after transcribed. The interviews constituted the corpus of the research, which supported the origin of the categories that will be addressed. Data analysis was performed by the Content Analysis technique operationalized through pre-analysis; exploration of the material; treatment of results, inference and interpretation⁽⁹⁾.

The research was approved with the number 33/2018. The participants' speeches were identified by the letter F followed by the interview number, in order to guarantee their anonymity.

RESULTS

Fifteen postpartum women participated, aged between 18 and 46 years old. Two had completed higher education, one had incomplete higher education, four had completed high school, five had incomplete high school, one had completed elementary school and two had incomplete elementary school. Two were administrative assistants, one was a nurse, three were students, and nine were engaged in household activities. Ten had fixed relationships and five were single. Their family incomes ranged from one to five Brazilian regional minimum wages.

Receiving the diagnosis of Gestational Syphilis by the postpartum woman

Most puerperal women were diagnosed with syphilis in their first prenatal visit through primary health care. Afterwards, they were referred to levels of greater complexity of health care according to their specificities.

It was prenatally, they had the HIV test and the Syphilis test together. It was in the first trimester of pregnancy. Positive for syphilis. (F5)

One of the participants reported discovering the diagnosis before pregnancy. She was diagnosed in her previous pregnancy and after treatment found that she was reinfected by her partner, who had not been treated.

I found out I had it in the first pregnancy when I was pregnant with my oldest daughter. I did the treatment. But then I got contaminated again. Because the father of my children, he told me he had the treatment, only he did not. When I found out I was pregnant now, it was when I found out that I had contaminated myself again. [...] (F3)

The reinfections occurred due to the treatment of only one partner or the fact that they did not protect themselves with barrier contraceptive methods.

[...] Of course he said we'd have to use the condom for nine months. But there's a problem with men, they don't like to use condoms, it's bad. So they simulate an unrealistic way to use a condom. And often, the woman who thinks she is married, owes obligations, falls into contradictions, this is wrong. [...] So my number increased [title] from 1:2 went to 1:8, and then I went crazy all the time. [...] (F14)

One said she contracted syphilis infection in the last trimester of pregnancy in the last prenatal tests.

When we do the prenatal consultation, they ask for all the initial exams, but in my case nothing had appeared at the initial exams. In fact, I did the initial exams in the first trimester. In the second quarter they ask again, and nothing came up either. I just got to know last quarter. [...] (F1)

One participant discovered the diagnosis only at birth, when she was told by the doctor about testing and testing for sexually transmitted infections. During prenatal care he reported that he was unaware of his diagnosis.

When he was born a doctor who said about the exam. During prenatal I did not know. (F4)

Reactions to the diagnosis of gestational syphilis

When diagnosed, they report fright, sadness, crying and dread. They associated their concerns and their most intense negative reactions to being pregnant and the possibility of the baby becoming infected.

It is frightening to know, especially during pregnancy, because if I had not been pregnant I might not have scared me so much. It was scary. [...] (F11)

It was hard, at first I was very scared [cry]. I wasn't sure what it was. But then my biggest fear was for him, it wasn't even for me, because she [doctor] said he could have a number of things. (F5)

Some mothers reported tranquility regarding their diagnosis of syphilis, considering that there was treatment for the infection or because they were already familiar with the subject because they discovered the diagnosis at a time before pregnancy, in the previous pregnancy or experiencing cases in the family.

[...] I was calm because I was going to take the injections. There is cure, there is treatment. I was quiet. (F10)

Normal, I lived it in my family. When I learned that I had treatment I was happy on the one hand, because it is already family, syphilis and HIV, which my father and mother already had. Only I didn't catch them. My mother took the drugs in my pregnancy. [...] I became normal, because syphilis has treatment. (F6)

Influence of the diagnosis on pregnancy and childbirth

Regarding the influence of the diagnosis on their pregnancy and childbirth, they referred symptoms such as lack of appetite, depression and drowsiness. They also reported that the greatest interference was psychological, knowing that there was some possibility of passing to the NB.

I think I had depression. [...] because I did not imagine, it was difficult. I had depression and intense sleep. I could not eat. I don't know if it was because of the disease or if it was because I was pregnant. (F15)

I was scared, [...] that would look like something in the baby. That's why I say that it touches the emotional, because you have to wait until nine months to see if the baby will be born perfect. (F1)

Others stated that there was no interference with pregnancy and childbirth.

Nothing, it did not affect anything. Just now, but she's getting treatment. But in pregnancy nothing. (F7)

I didn't feel anything abnormal, close to my other pregnancies, until this was the quietest. (F13)

Performing the treatment for gestational syphilis

Most mothers reported having received the treatment during prenatal care. They stressed the importance of starting treatment soon after diagnosis, but it was very painful.

I started treatment very early in my pregnancy. I did the pregnancy test, then I did the tests for other diseases and gave that I had syphilis. Treatment is very painful with Benzetacil, two on each buttock. I did three cycles of two injections at a time. (F7)

In the fifth month of pregnancy. I did Benzetacil, six shots, three weeks doing. My partner did the treatment with me on the same days. He said to me: It's not your fault, they will be born well. We will go through all this. Because I was very frustrated. (F15)

They pointed out that, despite having received the treatment, they were reinfected and had to undergo more than one treatment during pregnancy. The reasons for reinfection revealed the lack of information and care about how to prevent it and not treating the partner.

Yes, I did two ampoules for three Fridays, I did. Then my reagent went up again because his father had not treated. Then we treated them both together [...]. (F9)

One of the interviewees did not undergo the second treatment after reinfection, due to being close to delivery and not presenting the test results to health professionals.

I made five applications. In the first exam that came, I took two doses, and then I took three more when I gave it in the seventh month. And on the last exam, which was not supposed to give anything because I had already done the five doses, it increased. Then I didn't do the treatment again, because right after that I already got her here. I didn't even have this last exam at the post, got it? (F13)

A postpartum woman finished treatment a week before the baby was born.

Thank God the doctor saw it all, because I had already been through three doctors, and she gave me the right treatment. We ran to make this medicine in time for him to be born. I think I finished the treatment one week and he was born the next. (F1)

One participant mentioned that no prenatal treatment was indicated and no screening for sexually transmitted infections was performed.

I had prenatal care, but no treatment was indicated. No examination was performed. I only knew at birth. (F4)

DISCUSSION

The study participants were young puerperal women, with a mean age of 24.8 years

old. Most of them had more than eight years of schooling, had a steady partner and were unemployed, performing household activities. Studies have shown a high prevalence of syphilis in young women with good educational attainment⁽¹⁰⁻¹¹⁾.

A research reveals a higher prevalence of infection in women with multiple partners⁽¹²⁾. However, in this study, most women had a steady partner and were in a stable relationship. Other research studies also found that most of the infected women were housewives⁽¹³⁻¹⁴⁾.

The diagnosis of Gestational Syphilis was received at different times: before pregnancy, at the first prenatal visits or in the last trimester of pregnancy. It was verified that prenatal care is an important tool in the diagnosis, guidance and follow-up of pregnant women in the detection of gestational syphilis, aiming at its early prophylaxis, avoiding infection of the newborn. However, late diagnoses are still observed, in which complications become more serious and difficult to mitigate⁽¹⁵⁾.

Reinfections have been found due to the treatment of only one partner or the fact that they do not protect themselves with barrier contraceptive methods. This shows that there are still failures to obtain information about syphilis and to prevent it during pregnancy⁽¹⁶⁾.

Women with fewer prenatal or non-prenatal visits had a four to five-fold increase in the prevalence of late or no syphilis screening compared with women with 11 or more prenatal visits⁽¹⁷⁾. It is 7.4 times more likely to occur in syphilis in women who did not receive prenatal care⁽¹⁶⁾.

Despite the scope of prenatal care, as seen in the present study, it is not assumed that the care received is of quality. Failures in the diagnosis and treatment of gestational syphilis infection were observed, visualized by the high number of reinfections during pregnancy, facilitating the chance of transmission to the newborn. A study shows that 81.4% of the mothers had congenital syphilis in prenatal care during pregnancy and 48% were diagnosed in prenatal care⁽⁸⁾.

One study found that half of the cases of mothers with syphilis (48.4%) started follow-up in the first trimester of pregnancy. However, most pregnant women had a late diagnosis⁽¹¹⁾. In Fortaleza, the diagnosis of syphilis occurred in 75.4% cases during pregnancy, and 86.1% received the diagnosis between the second and third trimesters of pregnancy⁽¹⁸⁾.

There is a need for higher quality prenatal care and guidance for mother and her partner regarding treatment and prevention of syphilis⁽¹⁹⁾. Research has found that only 22.3% of partners of women with gestational syphilis undergo treatment⁽²⁰⁾. Data corroborated by another study that stated that 83% of women with syphilis have not had their partners treated⁽⁸⁾.

There are participants who contracted syphilis infection only in the last trimesters of pregnancy. One participant discovered the diagnosis only at childbirth; during prenatal reported that he was unaware of his diagnosis. Similar results showed that approximately 33.3% did not screen until 24 weeks of gestation and 19.2% had late or absent screening⁽¹⁷⁾.

A study found that the diagnosis of maternal gestational syphilis was 40.4% during pregnancy, 34.2% at delivery or postabortion curettage, 22.8% after delivery and 0.5% of cases the disease has not been investigated and 2.1% of cases have been ignored⁽²⁰⁾. In another study, in 41.0% of cases, the diagnosis of maternal syphilis occurred at delivery/curettage, and in 40.1% of cases during prenatal care⁽¹⁰⁾.

Faced with the diagnosis of Gestational Syphilis, the women reported fright, sadness, crying and dread. They associated their concerns and negative reactions with being pregnant and the possibility of infection of the baby. Some reported tranquility, considering that there was treatment for the infection, having discovered the diagnosis in a previous pregnancy or experiencing cases in the family.

Reported that the major influence of diagnosis on pregnancy and childbirth was

psychological due to the possibility of moving to the NB. A study conducted in Piauí makes visible the incidence of syphilis transmission to the newborn. Among 388 reports of pregnant women diagnosed with syphilis, 193 transmitted the bacillus *T. pallidum* for their concepts⁽²⁰⁾.

Most underwent syphilis treatment in the prenatal soon after diagnosis. Some were reinfected and had to undergo more than one treatment during pregnancy. They revealed as lack of information and care about how to prevent it and not treating the partner. One postpartum reported not having received treatment after reinfection, another had terminated treatment one week before the baby was born and another had not received treatment during prenatal care because it was not tested for sexually transmitted infections. They also mentioned that the treatment is painful.

In the first twenty-four hours of treatment for syphilis in pregnancy, acute reactions such as fever, headache, myalgia, and other symptoms, known as the Jarisch-Herxheimer reaction, may occur. It occurs in about 40% of pregnant women treated for syphilis, especially when their treatment occurs in the second half of pregnancy, and may present contractions and decelerations in fetal heart rate⁽²¹⁾.

Even aware of the diagnosis and reporting having undergone treatment, they reinfected and extend the transmission of the infection to more than one pregnancy. This fact shows how much there are still shortcomings about ways to prevent the STI. A study conducted in Rio de Janeiro showed that the occurrence of previous pregnancy with syphilis did not eliminate the risk of disease in future pregnancies⁽²²⁾.

According to the Ministry of Health, the risk of infection to the fetus becomes lower if treatment is terminated 30 days before delivery⁽²³⁾. Treatment is considered inappropriate after this period, and the newborn should be classified as congenital syphilis⁽²⁴⁾. Testing is required during the first and last trimester of pregnancy and also at birth to monitor and preventively prevent relapses during prenatal care.

The study's limitations were that it was conducted in a single context and the difficulty in accepting the mothers for participation. Research should be conducted on the subject in search of strategies to reduce the number of syphilis cases, especially among pregnant women and newborns.

CONCLUSION

The study aimed to understand the repercussions of the diagnosis of Gestational Syphilis for the postpartum woman. This diagnosis was received before pregnancy, in the first prenatal consultations or in the last trimester of pregnancy. In face of the diagnosis, the women expressed fright, sadness, crying and dread due to being pregnant and the possibility of infection of the baby. Some reported tranquility because there was treatment for the infection, having discovered the diagnosis in a previous pregnancy or experiencing cases in the family. Reported that the major influence of diagnosis on pregnancy and childbirth was psychological. Most puerperal women were treated for syphilis as early as soon after diagnosis. Some were reinfected, having to undergo more than one treatment during pregnancy, and revealed as a reason the lack of information and care about prevention and non-treatment of the partner.

Some puerperal women failed to treat because there was reinfection during pregnancy, treatment termination one week before the baby was born and no treatment during prenatal care.

It was concluded that there is a great misinformation of puerperal women regarding syphilis infection. More guidance is needed on the importance of treatment and the use of barrier protection methods during sexual intercourse. There are still gaps in screening for gestational syphilis that need to be filled by testing pregnant women for STI to avoid late

diagnosis and fetal contamination.

The public policies are not being effective in curbing syphilis contamination. New strategies are needed to fight infection, transmitting information and promoting the health of the mother-baby binomial.

Nurses should take advantage of prenatal care and the period of hospitalization of newborns with congenital syphilis to perform the educational practice with these puerperal women, monitor and clarify pregnant women at the time of disclosure of their diagnosis of Gestational Syphilis, advising on symptoms, risks and prophylaxis to prevent fetal infection, as well as prevent reinfection. This practice should also guide and emphasize the importance of testing during prenatal STI follow-up and concomitant partner treatment.

REFERENCES

1. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Departamento de DST, Aids e Hepatites Virais. Protocolo clínico e diretrizes terapêuticas para atenção integral às pessoas com infecções sexualmente transmissíveis. Relatório de Recomendação. [Internet] Brasília: Ministério da Saúde; 2015 [access 15 ago 2018]. Available at: http://bvsmis.saude.gov.br/bvs/publicacoes/protocolo_clinico_diretrizes_terapeutica_atencao_integral_pessoas_infeccoes_sexualmente_transmissiveis.pdf.
2. Organização Mundial da Saúde (OMS). Diagnóstico laboratorial de doenças sexualmente transmissíveis, incluindo o vírus da imunodeficiência humana. [Internet] Brasília: OMS; 2015 [access 20 ago 2018]. Available at: https://apps.who.int/iris/bitstream/handle/10665/85343/9789241505840_por.pdf;jsessionid=FF6F4CED8B0E323C6824F9AAA3DA766C?sequence=7.
3. Cunha ARC da, Merchan-Hamann E. Sífilis em parturientes no Brasil: prevalência e fatores associados, 2010 a 2011. Rev Panam Salud Publica [Internet]. 2015 [access 20 set 2018]; 38(6). Available at: <https://www.scielosp.org/article/rpsp/2015.v38n6/479-486/pt/>.
4. Domingues RMM, Leal M do C. Incidência de sífilis congênita e fatores associados à transmissão vertical da sífilis: dados do estudo nascer no Brasil. Cad Saude Publica [Internet]. 2016 [access 06 jul 2018]; 32(6). Available at: <http://dx.doi.org/10.1590/0102-311X00082415>.
5. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Boletim Epidemiológico- Sífilis. [Internet] Brasília: Ministério da Saúde; 2017 [access 22 set 2018]. Available at: <http://www.aids.gov.br/pt-br/pub/2017/boletim-epidemiologico-de-sifilis-2017>.
6. World Health Organization (WHO). Sexually Transmitted Infections (STIs), The importance of a renewed commitment to STI prevention and control in achieving global sexual and reproductive health. [Internet]. 2013. [access 20 set 2018]. Available at: http://www.who.int/reproductivehealth/publications/rtis/rhr13_02/en/index.html.
7. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Passo a passo PSE: Programa Saúde na Escola: tecendo caminhos da intersetorialidade. [Internet] Brasília: Ministério da Saúde; 2011 [access 05 set 2018]. Available at: http://bvsmis.saude.gov.br/bvs/publicacoes/passos_a_passo_programa_saude_escola.pdf.
8. Cavalcante PA de M, Pereira RB de L, Castro JGD. Sífilis gestacional e congênita em Palmas, Tocantins, 2007-2014. Epidemiol. Serv. Saúde. [Internet]. 2017 [access 10 set 2017]; 26(2). Available at: <http://dx.doi.org/10.5123/s1679-49742017000200003>.
9. Bardin L. Análise de Conteúdo. São Paulo: Edições 70; 2011.
10. Carvalho I da S, Brito RS de. Sífilis congênita no Rio Grande do Norte: estudo descritivo do período 2007-2010. Epidemiol. Serv. Saúde. [Internet]. 2014 [access 26 out 2017]; 23(2). Available at: <http://dx.doi.org/10.5123/S1679-49742014000200010>.

11. Lafetá KRG, Martelli Junior H; Silveira MF, Paranaíba LMR. Sífilis materna e congênita, subnotificação e difícil controle. Rev. bras. epidemiol. [Internet]. 2016 [access 20 jul 2017]; 19(1). Available at: <http://dx.doi.org/10.1590/1980-5497201600010006>.
12. Nonato SM, Melo APS, Guimarães MDC. Syphilis in pregnancy and factors associated with congenital syphilis in Belo Horizonte-MG, Brazil, 2010-2013. Epidemiol. Serv. Saúde. [Internet]. 2015 [access 01 set 2018]; 24(4). Available at: http://www.scielo.br/scielo.php?pid=S2237-96222015000400681&script=sci_arttext&tlng=en.
13. Lima VC, Mororó RM, Martins MA, Ribeiro SM, Linhares MSC. Perfil epidemiológico dos casos de sífilis congênita em um município de médio porte no nordeste brasileiro. J. Health Biol Sci. [Internet]. 2017 [access 01 ago 2018]; 5(1). Available at: <http://dx.doi.org/10.12662/2317-3076jhbs.v5i1.1012.p56-61.2017>.
14. Moreira KFA, Oliveira DM de, Alencar LN de, Cavalcante DFB, Pinheiro A de S, Orfão NH. Profile of notified cases of congenital syphilis. Cogitare enferm. [Internet]. 2017 [access 06 jul 2018]; 22(2). Available at: <http://www.saude.ufpr.br/portal/revistacogitare/wp-content/uploads/sites/28/2017/04/48949-200945-1-PB.pdf>.
15. Rodrigues VLR, Oliveira FM de, Afonso TM. Sífilis congênita na perspectiva de um desafio para a saúde pública. International Nursing Congress Theme: Good practices of nursing representations in the construction of society. [Internet]. 2017. [access 23 jun 2018]. Available at: <https://eventos.set.edu.br/index.php/cie/article/view/5958>.
16. Padovani C, Oliveira RR de, Pelloso SM. Sífilis na gestação: associação das características maternas e perinatais em região do sul do Brasil. Rev. Latino-Am. Enfermagem. [Internet]. 2018 [access 14 set 2018]; 26. Available at: <http://dx.doi.org/10.1590/1518-8345.2305.3019>.
17. Cha S, Malik T, Abara WE, DeSimone MS, Schumann B, Mallada E, et al. Screening for Syphilis and Other Sexually Transmitted Infections in Pregnant Women — Guam, 2014. MMWR Morb. Mortal. Wkly. Rep. [Internet]. 2017 [access 03 ago 2018]; 66(24). Available at: <http://dx.doi.org/10.15585/mmwr.mm6624a4>.
18. Cardoso ARP, Araújo MAL, Cavalcante M do S, Frota MA, Melo SP de. Análise dos casos de sífilis gestacional e congênita nos anos de 2008 a 2010 em Fortaleza, Ceará, Brasil. Cienc. saude colet. [Internet]. 2018 [access ago 2017]; 23(2). Available at: <http://dx.doi.org/10.1590/1413-81232018232.01772016>.
19. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde Departamento de DST, Aids e Hepatites Virais. Protocolo clínico e diretrizes Terapêuticas para prevenção da transmissão vertical de HIV, sífilis e hepatites virais. [Internet] Brasília: Ministério da Saúde; 2015 [access 20 jul 2018]. Available at: <http://www.aids.gov.br/pt-br/pub/2015/protocolo-clinico-e-diretrizes-terapeuticas-para-prevencao-da-transmissao-vertical-de-hiv>.
20. Barbosa DRM, Almeida MG de, Silva AO, Araújo AA, Santos AG dos. Perfil epidemiológico dos casos de sífilis gestacional. Rev enferm UFPE online. [Internet]. 2017 [aceso em 10 out 2018]; 11(5). Available at: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/viewFile/23335/18934>.
21. Workowski KA, Bolan GA. Center for Disease Control and Prevention. Morbidity and Mortality Weekly Report. Sexually Transmitted Diseases Treatment Guidelines, 2015. Recommendations and Reports. [Internet]. 2015 [access 23 jul 2018]; 64(3). Disponível em: <https://www.cdc.gov/std/tg2015/tg-2015-print.pdf>.
22. Cerqueira LRP de, Monteiro DLM, Traquette SR, Rodrigues NCP, Trajano AJB, Souza FM de, et al. The magnitude of syphilis: from prevalence to vertical transmission. Rev. Inst. Med. trop. S. Paulo. [Internet]. 2017 [access 01 out 2018]; 59. Available at: <http://dx.doi.org/10.1590/s1678-9946201759078>.
23. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Departamento de DST, AIDS e Hepatites virais. Nota informativa nº 006/2016/GAB/DDAHV/SVS/MS. [Internet] Brasília: Ministério da Saúde; 2016 [access 01 out 2018]. Available at: <http://www.aids.gov.br/pt-br/legislacao/nota-informativa-no-0062016-gabddahvsms>.

24. Kollmann TR, Dobson SRM. Doenças Infecciosas do Feto e Recém-Nascido de Remington e Klein. 8. ed. Filadélfia: Elsevier Saunders; 2016.

Received: 22/03/2019

Finalized: 14/10/2019

Corresponding author:

Jéssica Gama da Silva

Universidade Federal do Rio Grande

R. Cristóvão Pereira, 320 - 91030-420 – Porto Alegre, RS, Brasil

E-mail: jehgama92@gmail.com

Role of Authors:

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - JPR, BDJ, MSM

Drafting the work or revising it critically for important intellectual content - PKON

Final approval of the version to be published - GCG

Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - JGS
