Maternal syphilis: Analysis of evidence regarding the failure to treat pregnant women

Sífilis materna: Análise de evidências referentes à falha no tratamento de gestantes

Leiliane Cristina de Aguiar[1] • Gisele Bezerra da Silva[2] • Joel Araujo dos Santos[3]
Cleison Bruno Machado Lima[4] • Ludmila Oliveira Gonçalves[5] • Marilyse de Oliveira Meneses[6]
Maria das Graças da Silva Machado[7] • Kelson Lucas Bezerra de Albuquerque[8]

RESUMO

Objetivo: Analisar as evidências referentes à falha no tratamento da sífilis durante o período gestacional em mulheres atendidas em um hospital de referência em Parnaíba-PI. Metodologia: A amostra foi composta por 24 gestantes/puérperas admitidas no Hospital Estadual Dirceu Arcoverde para trabalho de parto e que apresentaram VDRL reagente durante a internação. Como instrumento de coleta de dados, utilizou-se um formulário estruturado. Após a coleta, os dados foram mensurados através de estatística descritiva. Resultados: Das 24 mulheres, 22 realizaram pré-natal e 12 apresentaram VDRL reagente. Entre as 12, 11 foram tratadas na gestação, mas somente 3 foram consideradas adequadamente tratadas. Conclusão: Uma assistência de pré-natal inadequada colabora para a ocorrência de falhas no tratamento de gestantes com sífilis, o que pode resultar no aumento do número de casos da forma congênita. Sendo assim, é necessário novas estratégias que visem reduzir a transmissão vertical da sífilis.

Palavras-chaves: sífilis, sífilis congênita, assistência pré-natal, falha do tratamento.

ABSTRACT

Objective: To analyze the evidence regarding the failure to treat syphilis during the gestational period in women attending a referral hospital in Parnaíba-PI. Method: The sample consisted of 24 pregnant / puerperal women admitted to the Dirceu Arcoverde State Hospital for labor and who presented VDRL reagent during hospitalization. As a collection instrument, a structured form was used. After the data collection, the data were measured using descriptive statistics. Results: Of the 24 women, 22 underwent prenatal care and 12 presented VDRL reagent. Among the 12, 11 were treated in gestation, but only 3 were considered adequately treated. Conclusion: Inadequate prenatal care contributes to the occurrence of failures in the treatment of pregnant women with syphilis, which may result in an increase in the number of congenital cases. New strategies are needed to reduce vertical transmission of syphilis.

Keywords: syphilis, congenital syphilis, prenatal care, treatment failure.

NOTA

[1]Enfermeira graduada pela Universidade Estadual do Piauí, Parnaíba, Piauí, Brasil. Pós-Graduada em Saúde Pública e Saúde da Família pelo Instituto Dexter – Desenvolvimento Humano: leili-phb@hotmail.com
[2]Especialista em Enfermagem Obstétrica pela Faculdade Evolução. Mestranda em Saúde da Mulher pela UFPI: gi-bezerra@hotmail.com
[3]Especialista em Docência do Ensino Superior e Enfermagem Obstétrica e Neonatal. Mestrando em Saúde da Mulher pela UFPI. Professor Auxiliar do Curso de Enfermagem da Universidade Estadual do Piauí – UESPI: joel-enf@hotmail.com
[4]Enfermeiro graduado pela Universidade Estadual do Piauí, Parnaíba, Piauí, Brasil. Especialista em Saúde da Família pela Uninovafapi: cleisonbruno@hotmail.com
[5]Enfermeira graduada pela Universidade Estadual do Piauí, Parnaíba, Piauí, Brasil: lud.enf@outlook.com
[6]Enfermeira graduada pela Universidade Estadual do Piauí, Parnaíba, Piauí, Brasil: marilyse_meneses@hotmail.com
[7]Enfermeira graduada pela Universidade Estadual do Piauí, Parnaíba, Piauí, Brasil: gracinha_13phb@hotmail.com
[8]Enfermeiro graduado pela Universidade Estadual do Piauí, Parnaíba, Piauí, Brasil: klucas260892@gmail.com

INTRODUCTION

Syphilis is a systemic sexually transmitted infection caused by the bacterium Treponema pallidum [1]. Its transmission can occur either sexually or vertically, in which the form of vertical transmission results in congenital syphilis [2]. Its clinical manifestations will depend on the stage of the infection, which differ depending on the time of infection [3].

The disease has three phases: primary, secondary and tertiary, interspersed by periods of latency. When untreated, it can compromise the nervous system, cardiovascular system, respiratory system and gastrointestinal tract, which is the most severe form [4].

Its diagnosis is established mainly through serological tests, which are divided into treponemal (TPHA, FTA-Abs, ELISA) and non-treponemal tests (VDRL, RPR) [2]. The preferred drug used for treatment is penicillin, and the dose and duration depend on the stage of infection in the patient [5]. Both diagnosis and treatment can be performed with little or no difficulty and at a low cost [6].

Syphilis is part of the group of infectious diseases that need to be investigated during prenatal care and belongs to the class of STIs (Sexually Transmitted Infections) that most concern health services because it can be transmitted from the mother to the child during pregnancy [7]. According to the World Health Organization (WHO), about one million people get an STI every day. Each year approximately 500 million people contract one of the curable STIs, such as syphilis, chlamydia, gonorrhea and trichomoniasis [8].

The number of syphilis cases in Brazil has increased considerably in recent years. From the outset, it is important that all health professionals are attentive to their clinical manifestations so that they can perform the diagnostic tests and start treatment as soon as possible [4].

Due to the need for more efficient surveillance systems and an adequate follow-up of the treatment of syphilis during pregnancy, this work is justified, since it intends to analyze the possible flaws in the treatment of pregnant women, which has contributed to the increase in the number of cases of congenital syphilis. It is hoped that this study will contribute to the improvement of the actions performed by health professionals in prenatal care in relation to the diagnosis and treatment of syphilis, thus providing information that contributes to the breakdown of the transmission chain and especially to the prevention of congenital syphilis.

The objective of this study was to analyze the evidence regarding the failure to treat syphilis during the gestational period in women treated at the Dirceu Arcoverde State Hospital in the city of Parnaíba-PI.

METHOD

This is a descriptive, exploratory and analytical study with a quantitative approach. The research was carried out in the Municipality of Parnaíba, in the setting of the State Hospital Dirceu Arcoverde. The institution in question was chosen because it is a reference in the region and because it receives a large number of women in labor or with complications during pregnancy, besides attending other clinical specialties.

The sample consisted of 24 pregnant women (postpartum and / or abortion) admitted to the Dirceu Arcoverde State Hospital for labor and who presented VDRL reagent, performed during hospital stay as a protocol of the institution and who agreed to voluntarily participate in the study, signing the Term of Free and Informed Consent. In the case of participants under the age of 18, their parents or legal guardians were asked to sign the Term of Assent.

Data collection took place from May to July 2017. As a collection instrument, a structured form was used, and applied soon after the approval of the project by the Ethics Committee. The form was divided into two parts, the first dealing with aspects of the participant's identification: age, color (white, brown, yellow, black and indigenous) schooling (basic, high school, university), marital status (single, married, stable relationship) family income (less than 1 minimum wage, 1 minimum wage and more than 1 minimum wage) and place of origin. The second part of the form aimed to obtain data regarding the follow-up and treatment of syphilis in the participant and in their partner during prenatal care.

The forms were completed by the interviewer according to the participants' responses, during the women's hospitalization at the research site. They were answered according to the time availability of the participants and the interviewer, with total secrecy of the information collected. In addition, the women's prenatal card information was also evaluated. After the data collection, the data were measured through descriptive statistics: average, median and percentage and presented by means of graph and tables.

This research was developed after authorization from the institution responsible and approved by the Ethics and Research Committee of the State University of Piauí (UESPI) on opinion 2,059,388 dated May 11, 2017. Throughout the study, the confidentiality of information and anonymity was respected, preserving the identity of the research participants.

RESULTS

During the 2-month study period, 24 pregnant or postpartum women (birth and / or miscarriage) were interviewed who presented VDRL reagent during hospitalization. There were some losses during the data collection, three women with VDRL reagent were discharged before being interviewed and one escaped from the hos-

pital before receiving the test result. Table 1 shows the sociodemographic profile of the research participants.

The mean age of participants was 23.4 years, ranging from 16 to 33 years. Most of the students were brown (79.1%), with a predominance of elementary education (58.3%) and earn an income less than 1 minimum wage (58.3%). Of the 24 women, 14 (58.3%) reported being from the municipality of Parnaíba and the other 10 (41.7%) from nearby cities. Table 2 addresses the distribution of women interviewed in relation to prenatal care.

The obstetric history showed that 58.3% of the women had a history of less than 3 pregnancies including the current one, the number of pregnancies among the women ranged from 1 to 8 pregnancies.

It was observed that 22 (91.6%) got prenatal care. Among the 22 women, 12 (54.5%) went to less than six consults. It was also observed that among the 22, only 5 (22.7%) got the VDRL exam in the 1st and 3rd gestational trimester. Of the women who underwent the VDRL prenatal exam, 12 (63.1%) of them presented a reactive result.

It was observed that among the 12 women with VDRL reagent, 11 (91.7%) underwent treatment. Of the 11 women treated, 5 (45.5%) completed the treatment before the delivery. All women who underwent treatment reported that they were treated with benzathine penicillin (bezentacil).

Most women who were treated during pregnancy had a stable partner, except for one who was single, and 6 (60%) of the partners were also treated. All the partners who were treated with the pregnant women finished the treatment. Graph 18 shows the follow-up of the research participants, showing the distribution of women during prenatal care until the end of pregnancy.

TABLE – Socio-demographic profile of women with VDRL reagents seen in HEDA, Parnaíba-Pi, 2017

Sociodemographic Characteristics	Nº	%
Age		
11-20	9	37,5
21-30	13	54,1
31-40	2	8,3
TOTAL	**24**	**100**
Race		
Caucasian	1	4,1
Brown	19	79,1
Asian	0	0
Black	4	16,7
Native	0	0
TOTAL	**24**	**100**
Education		
Basic	14	58,3
High School	10	41,7
University	0	0
TOTAL	**24**	**100**
Marital status		
Single	9	37,5
Married	1	4,1
Stable relationship	14	58,3
TOTAL	**24**	**100**
Income		
< 1 minimum wage	14	58,3
= 1 minimum wage	10	41,7
> 1 minimum wage	0	0
TOTAL	**24**	**100**
City where they live		
Parnaíba	14	58,3
Another city	10	41,7
TOTAL	**24**	**100**

TABLE 2 – Distribution of women with VDRL reagent in prenatal care, attended at HEDA, Parnaíba-Pi, 2017

Prenatal	Nº	%
No of pregnancies		
< 3	14	58,3
= ou > de 3	10	41,7
TOTAL	**24**	**100**
Place		
Health Center	21	87,5
Private clinic	01	4,1
Hospital	00	00
Did not get prenatal care	02	8,3
TOTAL	**24**	**100**
No of consults		
< 6 consults	12	54,5
= or > 6 consults	10	45,5
TOTAL	**22**	**100**
Got the VDRL exam		
1ª, 2ª or 3ª trimester	14	63,6
1ª and 3ª trimesters	5	22,7
Didn't get the exam	3	13,6
TOTAL	**22**	**100**
VDRL exam result		
Reagente	12	63,1
Non-reagent	3	15,7
Inconclusive	1	5,2
Did not get the result	3	15,7
TOTAL	**19**	**100**
Realização do tratamento		
Sim	11	91,7
Não	1	8,3
TOTAL	**12**	**100**
Treatment completed before delivery		
30 or more days before delivery	3	27,2
Less than 30 days before delivery	2	18,1
Did not finish before delivery	6	54,5
TOTAL	**11**	**100**
Partners treated		
Yes	6	60
Not	4	40
TOTAL	**10**	**100**

Note: a)VDRL:Veneral Disease Research Laboratory.

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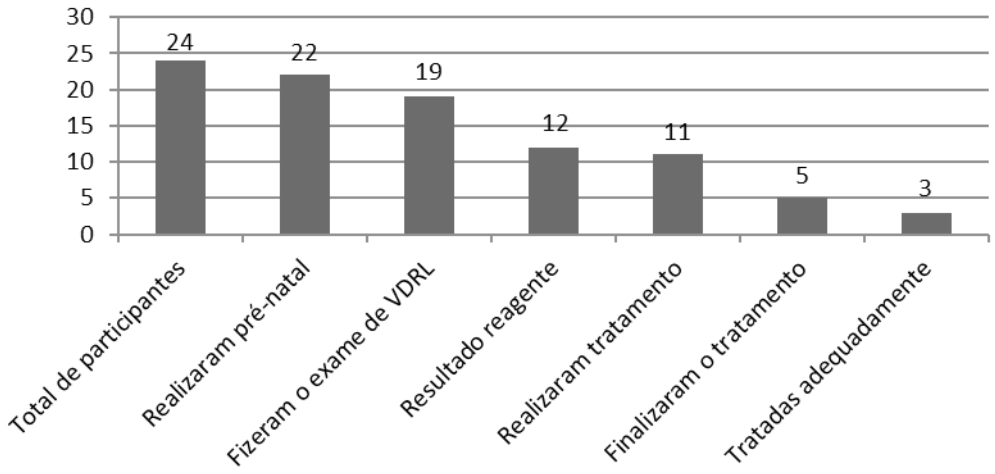
Only three women were considered to be adequately treated in the gestation, because they finished the treatment 30 days before delivery and their partners were treated concomitantly.

DISCUSSION

The data found in this study showed a higher occurrence of gestational syphilis in young women with low schooling. MESQUITA et al. In the study carried out in the state of Ceará, the prevalence of gestational syphilis was observed in young people aged 20 to 29 years [7]. There is similarity with other studies that also found a higher prevalence of syphilis in gestation in young women with low level of education [9-13].

Low schooling is associated with less access to information, lack of knowledge about syphilis and other types of sexually transmitted infections, as well as prevention and control measures [14]. The results found in this study and other authors indicate that low educational level and low socioeconomic status are related to poor access to health services.

CHART 1 – Distribution of women with VDRL reagent during hospitalization, during prenatal care, attended at HEDA, Parnaíba-Pi, 2017



15 (62.4%) of the women who were interviewed were married or had a stable relationship with the partner, and 9 (37.5%) of them were single. Different studies have demonstrated the relationship between sexual behavior and the presence of syphilis, HIV and other STIs in pregnant women [15]. In a study conducted in Rio de Janeiro, Souza found 5 times more chance of HIV / syphilis coinfection in single people than in those who were married or had fixed partners [16]. These data indicate that the number of partners is a risk factor for contracting sexually transmitted infections, as well as low socioeconomic status and low schooling.

In the case of syphilis, transmission through sexual contact is related to the stage of infection, which declines over time. Even so, it is possible to occur some years after the primary lesion [8], which could explain the presence of infection among pregnant women with fixed partners in this study. Another possible explanation would be infidelity on the part of the partners or the women themselves.

Among the interviewed women, 2 had not had prenatal care. Rosa et al. found a relationship between the failure to perform prenatal care and low education, which was considered in the study carried out on factors associated with non-prenatal care as one of the main responsible for not using health services in general [17]. Thus, the lack of attendance of the two women in the study in prenatal care may be related to their low level of education.

Regarding the number of prenatal consultations performed by pregnant women, only 10 (45.5%) performed six or more consultations, revealing that most of them did not reach the goal recommended by the Ministry of Health of at least six visits [6]. A close value was found by Campos et al. of 41.4% of the pregnant women interviewed had performed at least 6 prenatal consultations [10].

Several consultations below the recommended level may infer difficulty in accessing health services, as well as possible lack of interest or knowledge by women about the actions that are developed in prenatal care. Because of this, primary care must develop strategies that facilitate women's access to services that are made available during pregnancy and stimulate their adherence to prenatal care. The presence and adherence of pregnant women from the beginning of pregnancy, combined with quality care, give them the opportunity to receive important information for a pregnancy without complications and guidelines to protect them from sexually transmitted infections such as syphilis [14]. Therefore, it is important to follow up during the entire gestational period.

More than half of the women in the study did not screen for syphilis adequately during the gestational period, as only 5 (22.7%) had undergone VDRL examination in the first and third trimesters, as recommended by the Ministry of Health. Accordingly, the VDRL examination should be performed early in prenatal care in the first trimester and repeated in the third trimester and at the time of delivery [18]. The VDRL exams at the beginning and at the end of gestation are aimed at ensuring the early treatment of the pregnant woman with syphilis in order to avoid congenital syphilis. VDRL at the time of delivery aims at identifying reinfections or diagnosing the infection in pregnant women not previously tested [19].

In this study, the percentage of women who performed more than one prenatal VDRL examination was close to that found by Donalísio et al. in the study carried out on the investigation of congenital syphilis in the Sumaré micro region of the State of São Paulo, where 22.3% of the women had performed at least 2 VDRL exams during pregnancy [20]. However, it was superior to that found by Nascimento et al. in Rio de Janeiro, between 2005

and 2008, where none of the pregnant women underwent more than one VDRL exam during prenatal care [12]. These data point to failures in the prevention of congenital syphilis because it indicates that screening for syphilis is not occurring during the prenatal care period.

The 3 women who had a non-reactive VDRL test performed the VDRL test in the 1st semester of pregnancy but did not repeat the test in the 3rd trimester, which prevented them from receiving pre-delivery treatment if the test had been performed in the last trimester with a reagent result, which would reduce the risk of congenital syphilis. Serological screening during prenatal care is an effective and important measure for the prevention of congenital syphilis [21].

Regarding the treatment of the partners of the study women, 6 (60%) of them were treated concomitantly. The Ministry of Health recommends that partners be treated with the pregnant woman during prenatal care [5]. Even though syphilis is a disease that has therapeutic resources capable of combating the causative agent, studies reveal that one of the main causes for its dissemination is the non-adherence of sexual partners to treatment [10, 20, 22], which would justify failure in the treatment of some pregnant women in this study. An important strategy for the management of syphilis during gestation would be to include the partner in prenatal care, being decisive for the effective cure of the mother and the prevention of congenital syphilis [11, 23].

The persistence of reagent titration at the time of delivery in the 3 women who were considered adequately treated may be attributed to unidentified failures in the treatment of the pregnant woman or her partner during prenatal care. Although three have performed adequate treatment, it is noteworthy that this information was based on their testimony without proof in writing on the prenatal card. A woman with syphilis during pregnancy is considered to be adequately treated when the treatment involves penicillin at the appropriate doses for the infection phase, performed treatment up to 30 days before delivery and when her partner is treated simultaneously [24]).

CONCLUSION

This study showed that prenatal care provided to women during pregnancy was not enough to prevent the occurrence of congenital syphilis. The guarantee of access to health services during the gestational period, the quality of the care offered during the prenatal care and at the time of childbirth is determinant for reducing the number of cases of congenital syphilis [6].

New strategies are therefore needed to reduce vertical transmission of syphilis, such as improving the organization of health services so that they can attract and accommodate women as early as possible, expand access to diagnostic and serological follow-up, provide training and continuous training for health professionals in the management of infected pregnant women, so that they are prepared to perform a quality prenatal care, in addition to the need for government investments in public policies that strengthen promotion and prevention actions of the disease.

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