



COMPARATIVE ANALYSIS OF THE INCIDENCE OF GESTATIONAL SYPHILIS IN MACEIÓ-AL

ANÁLISE COMPARATIVA DA INCIDÊNCIA DE SÍFILIS GESTACIONAL EM MACEIÓ-AL

ANÁLISIS COMPARATIVO DE LA INCIDENCIA DE SÍFILIS GESTACIONAL EN MACEIÓ-AL

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RESUMO

A sífilis é uma Infecção Sexualmente Transmissível (IST) de alta incidência mundial provocada pela bactéria gram-negativa *Treponema pallidum*. A transmissão pode ocorrer por contato sexual desprotegido com infectados, mucosa, sangue ou saliva de contaminados e por via transplacentária materno-fetal. Pode-se diagnosticar a Sífilis Gestacional (SG) por meio de exames de rastreio durante o pré-natal na grávida infectada que, se não tratada, provoca a sífilis congênita. Apesar de sua magnitude e notificação compulsória no Sistema de Informação de Agravos e Notificação (SINAN), sua baixa notificação torna o conhecimento de seu perfil epidemiológico extremamente relevante.

Objetivo: analisar o perfil epidemiológico de Sífilis Gestacional em Maceió (Alagoas), no período de 2011 a julho de 2019, comparando-o com os dados nacionais e do Nordeste.

Método: estudo descritivo, observacional, feito pelo levantamento de dados do SINAN disponível no Departamento de Informática do SUS/DATASUS. Os dados foram analisados segundo as seguintes variáveis: sexo, idade e período trimestral gestacional. **Resultados:** entre 2011 e junho de 2019, foram notificados 286.944 casos de SG no Brasil, 58.293 no Nordeste, 3.403 em Alagoas e 1.243 no município de Maceió (36,5% dos casos de Alagoas). No Brasil, o número de casos de 2011 a 2018 apresentou uma taxa de crescimento de 355,33%. Os dados nacionais e regionais mostram o 3º trimestre gestacional com maior prevalência de SG, excetuando Maceió, que teve o 2º trimestre como mais prevalente e o 1º trimestre com uma maior taxa de crescimento. **Conclusão:** a SG ainda é um desafio. O pré-natal incompleto e o não tratamento dos parceiros são imensos obstáculos na prevenção e no controle da doença. Identifica-se a necessidade de ações mais eficazes para o controle da sífilis, utilizando-se a educação em saúde como ferramenta na prevenção, transmissão, tratamento e riscos para gestantes/neonatos, além de incentivar a proteção feminina durante todo o ciclo reprodutivo.

Palavras-chave: Obstetrícia; Sífilis Congênita; Gravidez na Adolescência; Infecções Sexualmente Transmissíveis; Notificação de Doenças.

ABSTRACT

Syphilis is a Sexually Transmitted Infection (STI) of high incidence worldwide caused by the gram-negative bacteria *Treponema pallidum*. Transmission can occur through unprotected sexual contact with infected people, mucosa, blood or saliva from contaminated people and through maternal-fetal transplacental pathways. Gestational Syphilis (GS) can be diagnosed by prenatal screening in the infected pregnant woman who, if untreated, causes congenital syphilis. Despite its magnitude and compulsory notification in the Acute and Notification Information System (SINAN), its low notification makes the knowledge of its epidemiological profile extremely relevant. **Objective:** to analyze the

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epidemiological profile of Gestational Syphilis in Maceió (Alagoas), from 2011 to July 2019, comparing it with national and Northeastern data. **Method:** a descriptive, observational study made by the SINAN data survey available at the SUS/DATASUS Department of Informatics. The data were analyzed according to the following variables: sex, age and quarterly gestational period. **Results:** Between 2011 and June 2019, 286,944 cases of GS were reported in Brazil, 58,293 in the Northeast, 3,403 in Alagoas and 1,243 in the municipality of Maceió (36.5% of the cases in Alagoas). In Brazil, the number of cases from 2011 to 2018 showed a growth rate of 355.33%. National and regional data show the 3rd gestational quarter with higher prevalence of GS, except Maceió, which had the 2nd quarter as most prevalent and the 1st quarter with a higher growth rate. **Conclusion:** GS is still a challenge. Incomplete prenatal care and non-treatment of partners are immense obstacles in preventing and controlling the disease. The need for more effective actions to control syphilis is identified, using health education as a tool in prevention, transmission, treatment, and risks for pregnant women/neonates, in addition to encouraging female protection throughout the reproductive cycle.

Keywords: Obstetrics; Congenital Syphilis; Adolescent Pregnancy; Sexually Transmitted Infections; Disease Notification.

RESUMEN

La sífilis es una Infección de Transmisión Sexual (ITS) con alta incidencia mundial causada por la bacteria gramnegativa *Treponema pallidum*. La transmisión puede ocurrir a través del contacto sexual sin protección con infectados, mucosa, sangre o saliva contaminadas y por vía transplacentaria materno-fetal. La Sífilis Gestacional (SG) se puede diagnosticar mediante pruebas de detección durante la atención prenatal en la mujer embarazada infectada, que, si no se trata, provoca sífilis congénita. A pesar de su magnitud y notificación obligatoria en el Sistema de Información y Notificación de Enfermedades (SINAN), su baja notificación hace que el conocimiento de su perfil epidemiológico sea de suma relevancia. **Objetivo:** analizar el perfil epidemiológico de la Sífilis Gestacional en Maceió (Alagoas), de 2011 a julio de 2019, comparándolo con los datos nacionales y del Noreste. **Métodos:** estudio descriptivo, observacional, realizado mediante recolección de datos del SINAN disponibles en el Departamento de Informática del SUS / DATASUS. Los datos se analizaron de acuerdo con las siguientes variables: sexo, edad y período gestacional trimestral. **Resultados:** entre 2011 y junio de 2019 se notificaron 286.944 casos de SG en Brasil, 58.293 en el Noreste, 3.403 en Alagoas y 1.243 en el municipio de Maceió (36,5% de los casos en Alagoas). En Brasil, el número de casos de 2011 a 2018 mostró una tasa de crecimiento del 355,33%. Los datos nacionales y regionales muestran el 3er trimestre gestacional con mayor prevalencia de SG, a excepción de Maceió, que tuvo el 2º trimestre como el más prevalente y el 1º trimestre con mayor tasa de crecimiento. **Conclusión:** la SG sigue siendo un desafío. La atención prenatal incompleta y la falta de tratamiento de la pareja son obstáculos inmensos para prevenir y controlar la enfermedad. Se identifica la necesidad de acciones más efectivas para el control de la sífilis, utilizando la educación para la salud como herramienta en la prevención, transmisión, tratamiento y riesgos para las mujeres embarazadas/recién nacidos, además de incentivar la protección femenina durante todo el ciclo reproductivo.

Palabras clave: Obstetricia; Sífilis Congénita; Embarazo Adolescente; Infecciones de Transmisión Sexual; Notificación de Enfermedades.

INTRODUCTION

Sexually Transmitted Infections (STIs) are caused by viruses, bacteria or other microorganisms. They are transmitted mainly through sexual contact, without the use of condoms, with an infected person. The transmission of STIs can also occur without sexual contact, either through vertical mother-to-fetus transmission or through non-integral skin contact with contaminated body secretions.¹ Syphilis is a chronic infectious disease caused by *Treponema pallidum*, bacteria exclusive to humans. Syphilis has four stages of clinical classification:

primary, secondary, tertiary and latent.² When a pregnant woman is infected and not treated correctly, the bacterium is transmitted through a transplacental route and the fetus is affected by congenital syphilis. The laboratory diagnosis of this disease is made by means of *T. pallidum* spirochete research by means of serologic tests, plasma reagent rapid test and reagent screening test, the first being most used in outpatient clinics for its easy execution and fast result.³ The differential diagnosis depends on the clinical phase of acquired syphilis. In the beginning, it can be confused with herpes, soft cancers, pharmacodermias and traumatic ulcerations. The drug of choice for the treatment of syphilis is penicillin G benzathine, the only drug that crosses the transplacental barrier and treats the fetus. It is also vital to notify and treat the sexual partner in order to prevent the recurrence of infection. Gestational Syphilis (GS) has a simple diagnosis and easy treatment/healing, but it remains with significant infection values, so that the vertical transmission continues as a Brazilian public health problem, being the disease with the highest rate of infection in the gravitational-purperal period of the country.⁴ Despite the magnitude of the disease and its compulsory notification, with its aggregated data in the Acute and Notification Information System (SINAN), the lack of notification of syphilis is a reality, being relevant the knowledge of its epidemiological characteristics in the country, Northeast, Alagoas and Maceió.⁵ Aims to analyze the epidemiological profile of Gestational Syphilis in Maceió (Alagoas), from 2011 to July 2019, comparing it with national and Northeastern data.

METHOD

This study is of a descriptive, epidemiological nature, carried out by means of a survey of data from the Aggravates Notification Information System (SINAN). The data was analyzed according to the following variables observed in SINAN: gender, age and quarterly gestational period. After the collection, the data were tabulated and a simple descriptive analysis was performed. For the discovery of the percentages of each number of cases, the mathematical method of three simple rules was used. For the growth rates, the growth rate formula was used, with percentages and growth rates with two decimal places, without rounding.

RESULTS

It was found that from 2011 to June 30, 2019, 286,944 cases of syphilis in pregnant women were reported in Brazil, 58,293 in the Northeast of Brazil, 3,403 in the State of Alagoas and 1,243 in the municipality of Maceió. In Brazil, the

number of cases, from 2011 to 2018, showed a growth rate of 355.33%; in the Northeastern region, the growth rate was 360.39%. In Alagoas and Maceió, the number of cases did not increase in all years from 2011 to 2018, but in 2018, the increase is higher than in all other years in both. In the year 2019, there was a decrease in Brazil, in the Northeast, in Alagoas and in Maceió, but perhaps this is due to the fact that the cases were counted only until the month of June. With this analysis, a very large increase in the number of cases is visible from 2016 to 2017 and from 2017 to 2018, both at national, regional and municipal levels. Regarding the gestational age of pregnant women with syphilis, in Brazil, there was a higher prevalence of the 3rd quarter between 2011 and 2019, with a higher growth rate between 2011 and 2018 of 669.40% in the 1st quarter. In the Northeast, the 3rd quarter is the most prevalent between 2011 and 2019 and the 1st quarter has the highest growth rate between 2011 and 2018, at 604.44%. In Alagoas, the 3rd quarter is the most prevalent between 2011 and 2019 and the 1st quarter has the highest growth rate between 2011 and 2018, 779.31%. In the capital of Alagoas, the 2nd quarter is the most prevalent between 2011 and 2019, while the 1st quarter has the highest growth rate, 1,650%, between 2011 and 2018. Regarding the age group of pregnant women with syphilis in Brazil, the highest prevalence is 20 to 29 years between 2011 and 2019 and the highest growth rate is in the 15 to 19 year range, with 403.78% between 2011 and 2018. In Alagoas, the most prevalent age bracket was 20 to 29 between 2011 and 2019, while 15 to 19 was the fastest growing, with 589.18% between 2011 and 2018. As for schooling, the highest prevalence was "5th to 8th grade incomplete" between 2011 and 2019 in all geographic spaces, while there is diversity in the holders of the highest growth rate between 2011 and 2018, and in Brazil, the "upper incomplete" classification was 793.13% and in Alagoas, the "middle complete" classification was 1,133.33%. About race or color, in the four geographic spaces of the study, the classification "brown" has the highest prevalence between 2011 and 2019; while the classification "yellow" in Brazil has the highest growth rate, with 459.25% between 2011 and 2018, while in Alagoas, the classification "brown" has the highest growth rate, with 485.84% between 2011 and 2018. Regarding the treatment scheme prescribed for pregnant women with syphilis, penicillin is the most prevalent, but the "unrealized" classification, in general, is the one that grows the most. Regarding the clinical classification of pregnant women with syphilis, primary syphilis is the most prevalent, while latent syphilis has the highest growth rate.

DISCUSSION

This study briefly presented the temporal evolution of the GS in Maceió, comparing it with Brazil, the Northeast region and the State of Alagoas, pointing to the most vulnerable groups. Regarding the number of cases over the years studied, it was possible to observe, in a general way, a growing trend mainly in the space of time from 2016 to 2018. This may be due to possible problems in the quality of information and/or failure in underreporting or even in the quality of prenatal appointments, either in the numbers of appointments, request and performance of tests for diagnosis and effective treatment for this infection.⁶ In addition, many women give up on treatment and/or are repeat offenders, a fact that supports the increase in the number of babies with GS.⁷ The lack of treatment of partners includes cases where there has been inadequate treatment for the pregnant woman and also those who have not been treated according to current treatment guidelines or when it is not known who the father is or there is a lack of documentation of his treatment, one of the criteria to define the cases of Congenital Syphilis. Thus, pregnant women with syphilis experience inefficiency of treatment, reinfection and vertical transmission.⁸ When analyzing the gestational age, one can think of a failure in the syphilis diagnostic system at the beginning of pregnancy, since the diagnostic prevalence is in the last trimester, except in the capital of Alagoas, where the most evident trimester is the second. This configures a failure in the syphilis diagnostic system at the beginning of pregnancy.⁹ On the age group, the data highlight the need for health education actions focused on protected sexual practice and family planning, since the prevalence of infection is during the most intense phase of sexual life. Regarding schooling, the maternal profile found reflects the social context of syphilis, pointed out by attacking individuals with greater social vulnerabilities, relating this fact to the difficulty of proper diagnosis and treatment, since there is a highlight of women housewives with less study.¹⁰ In addition, it is important to pay attention to the growth of the number of cases in the higher levels of study. As far as color or race is concerned, we see a predominance of the brown color in Brazil, in the Northeast, in Alagoas and in Maceió. About the prescribed treatment scheme, the concern is for the classification of "unrealized" treatment, with a higher growth rate than penicillin, which makes the number of cases with Congenital Syphilis increase, since these pregnant women are not being treated. Regarding clinical classification, the disappearance of the wound spontaneously and the absence of symptoms or signs

are factors that result in the patient not going to hospital for proper care and increased contamination. Finally, it is extremely important to observe the high number of ignored cases, since each classification is important to build a more specific notification, which facilitates decision making to improve the reality of pregnant women with syphilis.¹¹

CONCLUSION

Syphilis in pregnant women is still a challenge, since the results point to failures related to prevention and control actions. The greatest obstacles are the unsatisfactory performance of prenatal care, the lack of treatment of partners and the absence of counseling, with data collection and generation of quality information also being fundamental. In view of this, it is identified that there is a need to implement more effective actions to control syphilis, making health education necessary in order to inform about the prevention, transmission, treatment and risks of this disease, especially in pregnant women and newborns, in addition to encouraging the protection of women throughout their reproductive cycle.

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