CLINICAL AND EPIDEMIOLOGICAL PROFILE OF SYPHILIS IN THE POPULATION OF THE MUNICIPALITY OF ANÁPOLIS-GOIÁS FROM 2018 TO 2022

Gabriella Andrade Viegas de Arruda[1]
Angélica Lima Brandão Simões[2]
Universidade Evangélica de Goiás – UniEVANGÉLICA

ABSTRACT

Syphilis is a systemic bacterial infection, caused by Treponema pallidum, transmitted mainly through sexual contact, but also from mother to child during gestation. In Brazil, in recent years, a significant increase in syphilis cases has been observed, especially among young women and pregnant women. A study conducted in Anápolis, Goiás, pointed to an increase in syphilis notifications between 2012 and 2018, with a sharp growth in cases among pregnant women. The study methodology included data collection from the Notifiable Diseases Information System (SINAN), covering sociodemographic and clinical aspects of cases reported between 2018 and 2022.

The results showed 2,401 syphilis notifications in Anápolis, with a higher prevalence among men and people aged 20 to 39. Formal education appears to influence awareness about the infection, and the majority of cases occurred among individuals who self-declared as mixed-race (Pardo). The analysis also revealed difficulties in data collection, with many cases unreported. The conclusion emphasizes the urgent need for awareness campaigns and improvements in case reporting, highlighting that prevention efforts are essential to control the spread of syphilis in the region. Data collection and analysis are fundamental for directing public health strategies and reducing the incidence of the disease in Brazil.

KEYWORDS: syphilis; syphilis serodiagnosis; treponemal infections; clinical epidemiology.

INTRODUCTION

Syphilis is a systemic infection of mandatory notification, caused by the gram-negative bacterium Treponema pallidum. The main route of transmission is sexual contact, characterizing it as a sexually transmitted infection (STI). Furthermore, syphilis can be transmitted congenitally during gestation and, in rare cases, through blood transfusions. In Brazil, transmission through blood transfusion is practically non-existent due to the strict infection control measures implemented in hemotherapy centers[1].

The gram-negative bacterium Treponema pallidum has humans as its only reservoir and is notorious for its ability to evade the immune system. This capacity is due to low immunogenicity and antigenic variation in lipoproteins. These are mainly within the bacterial structure, limiting antibody access and contributing to the persistence and duration of infections[2].

After sexual contact, primary syphilis has an incubation period ranging from 10 to 90 days, with an average of 21 days. It is important to emphasize that anyone can be infected by Treponema pallidum upon contact with infected individuals and with active lesions of the disease. Furthermore, previous contact with the bacterium and adequate treatment does not confer immunity to the individual[3].

In Goiás, between 2016 and 2020, a significant increase in syphilis cases was observed, especially among women aged 18 to 29. The reported cases were 679 in 2016, 915 in 2017, 1,619 in 2018, 1,827 in 2019, and 1,252 in 2020. In 2021, 666 cases were registered, possibly due to the COVID-19 pandemic. However, as the study does not include data after the peak of the pandemic, it is not possible to confirm with certainty whether the pandemic had a direct impact on case numbers[4].

Between 2012 and 2018, there was a significant increase in syphilis cases among pregnant women in the municipality of Anápolis, GO. During this period, the number of notifications increased from 34 cases (6.5% of the total) in 2012 to 132 cases (25.3%) in 2018, indicating a sharp growth. This increase reflects not only increased testing and the expanded use of rapid tests but also a reduction in the use of contraceptive methods. The study also highlights the need for a well-structured and effective health network, ranging from primary to tertiary care, to address this challenge in the municipality of Anápolis[5].

METHODOLOGY

This is an ecological study on syphilis cases in the municipality of Anápolis-Goiás, whose data were obtained by consulting databases of the Notifiable Diseases Information System (SINAN), made available by the Informatics Department of the Unified Health System (DATASUS), at the electronic address (http://www.datasus.gov.br), which was accessed on 06/04/2024 and 07/15/2024.

Data were collected from DATASUS, covering sociodemographic aspects (age, sex, race/color, education) according to the geographical macro-regions of Brazil. The clinical profile of patients with syphilis was also considered, taking into account social aspects and clinical data (outcome and diagnostic criterion).

The inclusion criteria encompass patients diagnosed with syphilis, of both sexes, who were notified and registered in DATASUS. The exclusion criterion covers data on cases of congenital syphilis.

This study did not require analysis by the UniEVANGÉLICA Research Ethics Committee (CEP), as it used aggregated, public secondary data available on the official website of the Ministry of Health (MS), without information that would allow the identification of the individuals in the studied sample.

For data collection, the DATASUS system was used, providing secondary data related to syphilis cases from 2018 to 2022, such as: age group, race, sex, classification and outcome, making it possible to identify the clinical and epidemiological profile of syphilis in this period.

Data from Anápolis were tabulated and analyzed in Microsoft Excel®, considering the classification, outcome, age, sex, and race/color of clinical cases. The results were presented in absolute values, analyzed by absolute and relative frequency.

Research based on anonymous secondary data eliminates risks. It highlights benefits such as: understanding Syphilis in Anápolis, identifying vulnerable groups, guiding management and prevention, changing medical practices, and detecting underreporting during the COVID-19 pandemic. It helps health professionals, managers, and the community to deal with this health issue.

RESULTS

According to data obtained from DATASUS on reported syphilis cases in the municipality of Anápolis-GO, during the period from January 2018 to December 2022, 2,401 notifications were registered in the Notifiable Diseases Information System. Of these, 2,297 were confirmed, 8 discarded, 93 inconclusive, and 3 cases ignored. The highest number of notifications occurred in 2022, with a total of 743 cases.

The most affected age group throughout the study years was 20 to 39 years, accounting for 1,575 cases (65.59%). In contrast, the age group of 10 to 14 years had only 2 cases (0.083%).

Regarding sex, the prevalence of syphilis was higher among men, who totaled 1,742 cases (72.5%). Notified women totaled 659 cases (27.41%). In all age groups, syphilis was more frequently diagnosed in men, except in the 10 to 14 years age group, where prevalence was higher among women.

Of the 2,401 individuals notified, 39.5% completed high school and 20.07% have incomplete high school education. Prevalence among those with complete high school was observed in all study years, except in 2022, when the highest prevalence was among those who did not complete high school.

Furthermore, a predominance of reported syphilis cases was noted among individuals who self-declared as mixed-race (Pardo), totaling 1,680 people (69.97%). The least affected group was that of self-declared indigenous people, with only 1 case (0.041%).

Regarding diagnostic criteria, of the 2,401 reported cases, 2,277 were classified as laboratory-confirmed, 22 as clinical-epidemiological, and 102 did not record the criterion used.

Regarding case outcomes, 1,293 cases were ignored, 1,106 were cured, and 2 deaths from other causes were observed. In the years 2020 and 2021, cases that were cured prevailed. In 2018, 2019, and 2022, it was not possible to determine a pattern, as there was a higher proportion of unreported outcome.

CONCLUSION

An analysis of syphilis data in Anápolis-GO between 2018 and 2022 pointed to a significant increase in cases, mainly in 2022, with the most affected age group being between 20 and 39 years and a higher prevalence among men. The education level of those affected suggests the importance of education in disease awareness and prevention.

Racial self-declaration reveals trends among mixed-race individuals (Pardo), with cases that highlight the importance of adequate follow-up and an efficient notification system. The high rate of ignored cases and lack of reported outcomes point to the need for improvements in data collection and processing.

The urgency of health education campaigns, focusing on the most affected age groups and communities, is evident. Prevention strategies and improvements in case reporting are essential to reduce syphilis in Anápolis and Brazil.

ACKNOWLEDGEMENTS

I would like to thank Professor Esp. Angelica Lima Simões, for her patience and availability in guiding me and without whom this research would not exist, the Evangelical University of Goiás which provided me with this PIVIC (Scientific Initiation Scholarship Program), and CNPq (National Council for Scientific and Technological Development) for all the research incentive.

REFERÊNCIAS BIBLIOGRÁFICAS

1. FURLAM, T. O., et al. Efeito colateral da pandemia de Covid-19 no Brasil sobre o número de procedimentos diagnósticos e de tratamento da sífilis. **Revista brasileira de estudos de população**, v. 39, p. 1-15, 2022.

2. BRAGA, A. O. Aspectos gerais da infecção pela bactéria Treponema pallidum: uma revisão. 2018. 63 f. **Monografia (Graduação em Biomedicina) – Curso de Biomedicina. Centro de Biociências**. Universidade Federal do Rio Grande do Norte, Natal, 2018.

3. BRASIL. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Articulação Estratégica de Vigilância em Saúde. **Guia de Vigilância em Saúde. Brasília**: Ministério da Saúde, 2022.

4. DAMASCENO, A. et al. Sífilis na gravidez. **Revista Hospital Universitário Pedro Ernesto (HUPE)**, v. 13, n. 3, pág 89 e 90, 2014.

5. FILHO, R. C. S., et al. Situação clínico-epidemiológica da sífilis gestacional em Anápolis-GO: uma análise retrospectiva. **Cogitare Enferm**. 2021.