CLINICAL AND EPIDEMIOLOGICAL PROFILE OF SYPHILIS IN THE MIDWEST REGION FROM 2018 TO 2022

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ABSTRACT

INTRODUCTION: Syphilis is a systemic infection of compulsory notification, transmitted mainly through sexual contact with infected individuals with active lesions of the disease. The infection presents in episodes of active disease interspersed with periods of latency. Signs and symptoms vary according to each stage of the disease, which is divided into primary, secondary, latent, and tertiary. In the current scenario, there has been an increase in the number of cases. The objective of this study is to outline the clinical and epidemiological profile of syphilis in the population of the Midwest region from 2018 to 2022. METHODOLOGY: This is an observational epidemiological study of syphilis cases in the Midwest region, whose data were obtained by consulting the databases of the Notifiable Diseases Information System (SINAN). The data were collected from DATASUS regarding sociodemographic aspects (age, sex, race/color, education) and clinical data (evolution and diagnostic criteria) according to the Midwest region of Brazil. RESULTS: During the study period, 64,839 cases were reported, with 2022 having the highest number of notifications. The most affected profile was brown men, aged 20-39, with complete high school education, diagnosed by laboratory criteria and who progressed to cure. CONCLUSION: It is essential to intensify prevention campaigns, improve access to treatment, and strengthen epidemiological surveillance to reduce the burden of syphilis in the region.

Keywords: Syphilis; Serodiagnosis of syphilis; Treponema infections.

INTRODUCTION

Syphilis is a systemic infection of compulsory notification caused by the bacterium *Treponema pallidum*, which is transmitted mainly through sexual contact. This bacterium has a high capacity to evade the immune system, promoting persistent infections. All individuals are susceptible to infection by *Treponema pallidum.* Sexual contact with infected individuals and with active lesions of the disease is the main form of contamination[1-2.]

The disease presents in episodes of active disease interspersed with periods of latency. The signs and symptoms of syphilis vary according to each stage of the disease, which is divided into primary syphilis, secondary syphilis, latent syphilis, and tertiary syphilis. After inoculation of the bacteria through sexual transmission, there is an incubation period that lasts an average of 21 days, followed by the onset of primary syphilis or "hard chancre." It is characterized by a painless, non-itchy sore at the site of entry of the bacteria, which disappears on its own, regardless of treatment[3-4.]

Secondary syphilis is characterized by the appearance of non-itchy spots, fever, malaise, headache, and lymphadenopathy throughout the body, between 6 weeks and 6 months after the appearance and healing of the initial lesion, which disappear within a few weeks, regardless of treatment. Latent syphilis is also known as the asymptomatic phase, which can be recent (up to one year of infection) or late (more than one year of infection), with variable duration. Tertiary syphilis is characterized by the appearance of signs and symptoms, mainly lesions that affect various systems and can lead to death. Destructive granulomas form in the almost complete absence of the causative agent and may appear between 1 and 40 years after the onset of infection[4].

The diagnosis is made based on direct examinations and immunological tests, correlated with the clinical history, requiring knowledge of the stages of infection, its progression, and the ability of each test to detect the bacteria. The standard treatment for syphilis is antibiotic therapy, with benzathine penicillin as the antibiotic of choice. Prevention of syphilis infection is mainly achieved through the correct and regular use of barrier methods (STIs). In addition, regular testing of people who have sex is essential. In the current scenario, there is an increase in the number of cases, justified by poor quality health services and a lack of necessary medication for treatment, such as penicillin, thus missing the opportunity to stop transmission[5-6-7].

Thus, the objective is to outline the clinical and epidemiological profile of syphilis in the population of the Midwest region from 2018 to 2022, with the aim of preventing and treating the most vulnerable population.

METHODOLOGY

This is an observational epidemiological study of syphilis cases in the Midwest region, in which information was obtained by consulting the Notifiable Diseases Information System (SINAN) databases on sociodemographic aspects and clinical data for the Midwest region of Brazil.

The inclusion criteria are patients diagnosed with syphilis, male and female, who were notified and registered in DATASUS. The exclusion criterion was data from cases of congenital syphilis. This study did not require analysis by the Ethics and Research Committee (CEP) of UniEVANGÉLICA, as it used grouped secondary data

that is public and available on the official website of the Ministry of Health (MS). For analysis, the data were tabulated for the entire Brazilian Midwest region, depending on the variables analyzed, extracted from Tabnet. Since the data source provides secondary data without identification, the research is risk-free.

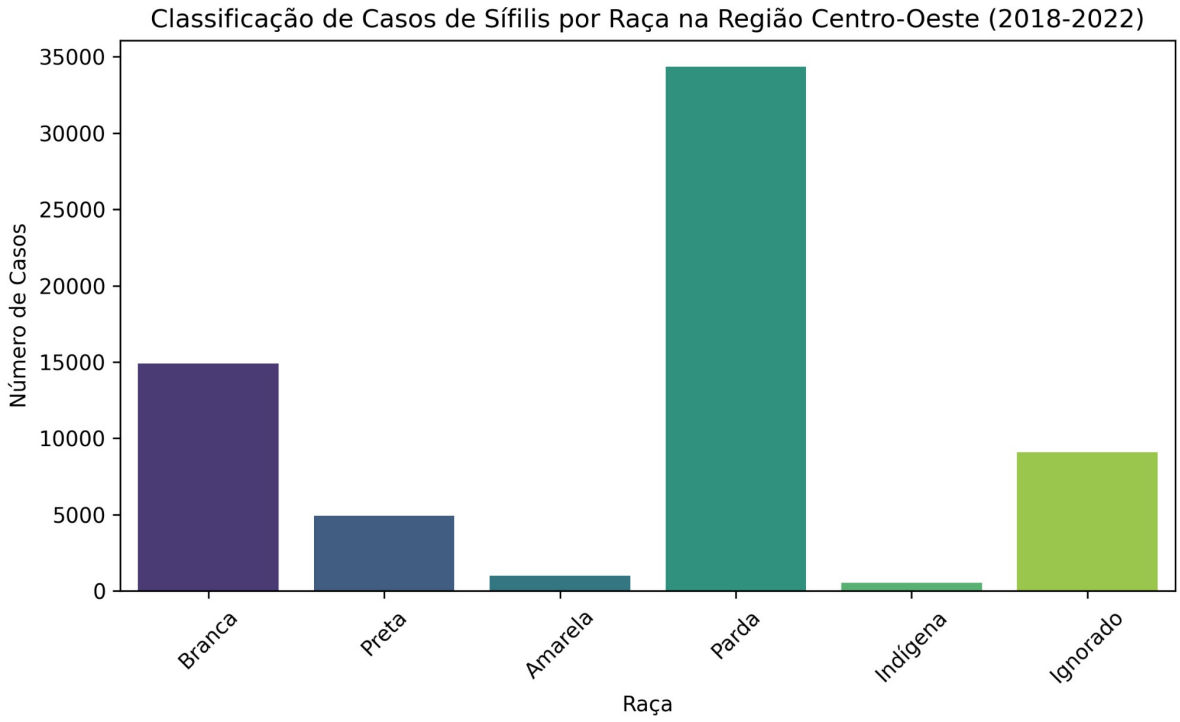
The present study has the benefit of providing the clinical and epidemiological profile of syphilis in the Midwest region, in order to inform about the most vulnerable population, with the aim of acting in the prevention and management of syphilis in the Midwest region.

RESULTS

According to data obtained from DATASUS on reported cases of syphilis in the Central-West region of Brazil, it is possible to state that between 2018 and 2022, 64,839 cases of syphilis were reported in the Central-West region of Brazil, 42,582 of which were male. The year 2022 had the highest number of notifications, with 16,458 cases. The most affected profile was men, brown, aged between 20 and 39 years old, and with a complete high school education. **Figure 1,** for example, shows the distribution of reported cases in the Midwest region according to race. Regarding the documented evolution, most patients progressed to cure. Of the cases diagnosed, there was a prevalence among cases diagnosed by laboratory criteria.

Based on the exploratory analysis highlighted above, it was found that individuals with a high school education were the most affected (12,642 cases). In light of the notifications regarding the type of diagnosis, 45,048 cases were identified by laboratory criteria, 3,985 by clinical-epidemiological criteria, and 15,806 were not reported.

Figure 1: Distribution of syphilis notifications by race in the Midwest Region between 2018 and 2022



Source: Ministry of Health. DATASUS. Tabnet. Brasília, DF: Ministry of Health, 2024.

CONCLUSION

The analysis of syphilis cases in the Midwest region between 2018 and 2022 reveals a high prevalence in the 20-39 age group and predominantly in males. An association with education and self-declared color/race is also observed, indicating socioeconomic and cultural influences. The high number of cases without recorded diagnostic criteria and the lack of information on clinical evolution highlight the need to improve reporting and data quality. Thus, it is essential to intensify prevention campaigns, improve access to treatment, and strengthen epidemiological surveillance to reduce the burden of syphilis in the region.

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