EPIDEMIOLOGICAL ANALYSIS OF LEPROSY (HANSEN'S DISEASE) IN THE MUNICIPALITY OF ANÁPOLIS – GOIÁS

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ABSTRACT

Leprosy is a chronic infectious disease caused by M. leprae. It is a disease of high infectivity and low pathogenicity, characterized by hypochromic or reddish patches associated with reduced local sensitivity. Regarding the pattern of this disease in Brazil, there are few studies on leprosy in the municipality of Anápolis. Thus, the present study aims to analyze epidemiological data related to leprosy infection in the city of Anápolis, Goiás. This is a quantitative, descriptive, observational, and cross-sectional study conducted in Anápolis, at the Municipal Health Department - Dr. Ilion Fleury Jr. Health Unit. Data were collected systematically, taking into account gender, age group, and home address. The analysis focused on describing and interpreting the available data, with an emphasis on identifying trends and general patterns. Regarding the results of the study, the data reveal a predominance of cases among men, with the most affected age group being between 50 and 64 years old. Data on the patients' place of residence show that leprosy cases are spread across several neighborhoods in Anápolis, with no concentration in a single area. Thus, in conclusion, the data can guide public policies and improve leprosy control, with an emphasis on early diagnosis, adequate treatment, and reduction of social stigma.

Keywords: *Mycobacterium leprae;* Leprosy; Hansen's disease; Hanseniasis

INTRODUCTION

Leprosy is a chronic and infectious disease characterized by social stigma linked to its manifestation. Its etiological agent is M. leprae, an obligate intracellular bacillus with high infectivity and low pathogenicity, affecting only the most susceptible individuals, with a particular predilection for skin cells and the peripheral nervous system, but which can also infect the eyes, internal organs, mucous membranes, and bones (BRASIL, 2017).

Among the various manifestations of this condition, the most notable are hypochromic or reddish spots, decreased sensitivity, papules, nodules, and hair loss. Transmission occurs mainly through the respiratory tract, through close and prolonged contact with individuals who have a high probability of contracting the infection, especially when they have not yet received treatment (VELOSO et al.,

2018).

It is known that if not treated properly, leprosy almost always slowly progresses to severe and even disabling manifestations. Therefore, early diagnosis of this disease through medical history, clinical examination, and complementary tests, as well as the dissemination of knowledge by health professionals to reduce the stigma associated with leprosy, are imperative for combating this disease (BOIGNY *et al.*, 2019).

With regard to the state of Goiás, there are few studies relating different variables prevalent in the region. In the city of Anápolis, it is known that between 2006 and 2010 the number of cases was higher among males aged 20 to 64 years (79.43%), with the majority being of the dimorphic clinical form (69.91%), and most cases progressing to cure (PEREIRA et al., 2015).

In this context, the main objective of this study is to analyze epidemiological data related to leprosy infection in the city of Anápolis, Goiás.

METHODOLOGY

This study is quantitative, descriptive, observational, and cross-sectional in nature and was conducted in Anápolis, at the Municipal Health Secretariat, specifically at the Dr. Ilion Fleury Jr. health unit, which is a reference center for viral hepatitis and leprosy. The research analyzed medical records registered in the unit's Sexually Transmitted Infections program up to the research period. Medical records of individuals of both sexes, without distinction of race, color, education, or sexual orientation, registered between 2019 and the first half of 2024 were included. Medical records with incomplete information or outside the collection period were excluded.

The data were collected systematically, focusing on sociodemographic information such as gender, age group, and home address, in order to outline a socioepidemiological profile. Made available through official letter [no.] 121/2024 – SEMUSA/DIVIG/GEEPI.

Due to variability in data quality and the lack of some information, it was not possible to perform detailed statistical analyses. Therefore, the analysis focused on describing and interpreting the available data, with an emphasis on identifying general trends and patterns.

With regard to ethical aspects, data confidentiality was ensured, and data were anonymized to protect the privacy of participants. The research was submitted to and approved by the ethics committee on July 14, 2024, with CAAE 79490824.0.0000.5076 and opinion number 6,947,882.

The limitations of the study include the inconsistent quality of the data, which may influence the accuracy and completeness of the information. In addition, the applicability of the results is limited to the specific context of Anápolis, restricting the generalization of the conclusions to other areas or situations.

RESULTS

Based on the epidemiological data on leprosy in the city of Anápolis, Goiás, it was possible to outline the sociodemographic profile of the affected population, considering the variables of gender, age group, and residential address.

Regarding gender, the data reveal a predominance of cases among men in all years analyzed, with the highest value in 2019 (Table 1).

Table 1. Leprosy cases by gender.

Leprosy - Sinan NET - CASES BY GENDER			
Year of Notification	Male	Female	Total
2019	37	21	58
2020	25	20	45
2021	19	15	34
2022	26	13	39
2023	27	13	40
2024	11	1	12
Total	145	83	22

Source: Official Letter No. 121/2024 – SEMUSA/ DIVIG/ GEEPI.

Analysis by age group shows that leprosy mainly affects middle-aged and elderly adults. The 50-64 age group recorded the highest number of cases, followed by the 35-49 age group (Table 2). Other age groups, such as 20 to 34 and 65 to 79, also had significant numbers (Table 2). The younger age groups (10 to 19) and the very elderly (80 years or older) had fewer cases (Table 2).

Table 2. Leprosy cases by age group.

Leprosy - Sinan NET - CASES BY AGE GROUP								
Year of Notification	1	1	2	35	50	65-79	80 and over	Total
2019	2	2	14	13	14	10	3	58
2020	0	2	10	8	15	8	2	45
2021	0	2	12	6	9	5	0	34
2022	1	1	10	13	7	5	2	39
2023	2	2	5	10	15	5	1	40
2024	0	0	5	1	3	3	0	12
Total	5	9	56	51	63	36	8	22

Source: Official Letter No. 121/2024 – SEMUSA/ DIVIG/ GEEPI.

Data on the place of residence of patients show that leprosy cases are spread across several neighborhoods in Anápolis, with no concentration in a single area. The neighborhoods of Jardim América, Jundiaí, and Vila Góis appear repeatedly in the records from 2019 to 2024, suggesting that these areas may have a higher prevalence of the disease.

CONCLUSION

Thus, the study revealed that leprosy in Anápolis is more prevalent among men aged 50 to 64 years, suggesting greater vulnerability among middle-aged and elderly adults, possibly due to socioeconomic and behavioral factors.

The geographic analysis identified that leprosy cases are distributed across several neighborhoods in Anápolis, highlighting the importance of public health strategies aimed at controlling leprosy in the most affected areas and educating the population about the means of prevention and treatment of the disease.

Thus, the information obtained can guide future public policies and health interventions aimed at reducing the incidence and more effectively controlling leprosy. It also reinforces the need to improve the quality of health records and the importance of continuous epidemiological surveillance to monitor and respond to changes in disease patterns. Finally, ensuring early diagnosis and adequate treatment are essential to reduce transmission and mitigate the impact of leprosy, promoting a more inclusive and compassionate approach to patient care.

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