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Research Article

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Epidemiological and Clinical Profile of New Cases of Leprosy Treated in Guinea Bissau, 2020 – 2024

Silvio Caetano Coelho1*, Ausa de Pina Mango2, & Carlitos Bangro Cá2

1Simão Mendes National Hospital, Hansen's Disease Hospital – Cumura, National Focal Point for Combating Leprosy, Ministry of Public Health, Guinea-Bissau

2Hansen's Disease Hospital – Cumura, Ministry of Public Health, Guinea-Bissau

***Corresponding author:** Silvio Caetano Coelho, Simão Mendes National Hospital, Hansen's Disease Hospital – Cumura, National Focal Point for Combating Leprosy, Ministry of Public Health, Guinea-Bissau

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Abstract

This study describes the epidemiological and clinical characteristics of new leprosy cases reported in Guinea-Bissau between 2020 and 2024. A retrospective descriptive analysis was conducted using data collected from the registry book of the Hospital do Mal de Hansen in Cumura, the national reference center for leprosy diagnosis and treatment. During the five-year period, 52 new cases were diagnosed, with men representing 58% of the patients. Multibacillary leprosy was the predominant clinical form, and individuals aged 45 years or older accounted for half of all cases. Grade II deformities were observed in 13% of patients. Additionally, 3% of cases involved immigrants who had spent the previous seven years outside endemic regions, and 15% of all detected cases originated from neighboring countries. Although Guinea-Bissau maintains an average detection rate of 0.05 per 10,000 inhabitants, population movement between endemic and non-endemic areas may influence surveillance outcomes. These findings highlight the continued burden of neglected tropical diseases in the country and underscore the need for strengthened surveillance strategies, particularly in non-endemic regions and cross-border areas.

Keywords: Leprosy, Epidemiology, Neglected Tropical Diseases, Guinea-Bissau, Multibacillary Leprosy, Public Health.

Introduction

The objective of this study is to outline the epidemiological and clinical descriptive profile of new cases of leprosy admitted to the Hospital do Mal de Hansen, reported in Guinea-Bissau, from 2020 to 2024.

Leprosy remains a persistent public health challenge in many low resource settings, including Guinea-Bissau. Despite global progress toward elimination, the disease continues to affect vulnerable populations, particularly in regions with limited access to healthcare, weak surveillance systems, and high population mobility. Mycobacterium leprae infection manifests along a spectrum influenced by host immunity, resulting in varied clinical presentations ranging from localized paucibacillary lesions to disseminated multibacillary disease. Early diagnosis and treatment remain essential to prevent permanent disabilities, which continue to burden affected communities. This study provides an updated epidemiological and clinical profile of newly diagnosed leprosy cases in Guinea-Bissau from 2020 to 2024, contributing valuable information for national and regional disease control strategies.

Figure 1: Multibacillary leprosy with multiple nodular lesions and hand involvement

Figure 2: Hypopigmented anesthetic patches on the trunk

Figure 3: Enlarged annular hypopigmented patch with raised borders

Figure 4: Advanced plantar involvement with digital deformities

Data were collected from the registry book of the Hospital do Mal de Hansen in Cumura, National Reference Centre for the diagnosis and treatment of leprosy

Methodology

This descriptive retrospective study analyzed all newly diagnosed cases of leprosy recorded between January 2020 and December 2024 at the Hospital do Mal de Hansen, the national reference center for leprosy diagnosis and treatment in Cumura, Guinea-Bissau. Case confirmation was based on epidemiological assessment, clinical history, dermatoneurological examination, and histopathology when indicated. Data were extracted from the institutional registry book and included demographic variables (age, sex, nationality, residence), clinical classification (paucibacillary or multibacillary), type and degree of deformities, and annual case distribution. Descriptive statistics were used to summarize trends over time. Ethical considerations were respected by anonymizing patient data throughout the analysis.

Table 1: Distribuction of cases by sex

Sex	N. Cases	%
Fem	22	42%
Masc	30	58%
Total	52	100,00

Table 2: Type of leprosy by sex

Sex	PB	MB	Total / Sex
Fem	0	23	23
Masc	2	27	29
Total	2	50	52

Results

A total of 52 new leprosy cases were identified during the five year period. Males accounted for 58% of cases, indicating a slight predominance over females (42%). Multibacillary disease was the most common clinical form, representing 96% of all diagnoses, and suggesting delayed detection or ongoing transmission. The most affected age group was ≥45 years, accounting for half of the total cases, while no cases were reported in children ≤14 years. Regarding physical disabilities, 13% of patients presented with grade II deformities at the time of diagnosis, highlighting late presentation. Annual case numbers fluctuated between 8 and 14 per year. Notably, 15% of cases originated from neighboring countries, and 3% were recent immigrants from non-endemic regions, underscoring the role of population mobility in local epidemiology.

Table 3: Distribution of cases by age

Age group	Fem	Masc	Total	%
≤ 14	0	0	0	0%
15 - 24	2	5	7	13%

25 - 34	3	7	10	19%
35 - 44	4	5	9	17%
45 - 59	4	8	12	23%
≥ 60	9	5	14	27%
Total	22	30	52	100%

Table 4: Type of degree of deformities

Grau	Fem	Masc	Total / Sex	%
0	18	15	33	63%
I	3	9	12	23%
II	1	6	7	13%
Total	22	30	52	100%

Table 5: Destruction of cases per year

year	Fem	Masc	Total
2020	3	6	9
2021	4	4	8
2022	8	6	14
2023	3	5	8
2024	4	9	13

Table 6:

Ano	Total	Pop G. Guiné	10 .000h
2020	9	1.168.000	0,07
2021	8	2.059.243	0,03
2022	14	2.105.566	0,06
2023	8	2.151.888	0,03
2024	13	2.199.229	0,05

Table 7:

Capital	10	19%
Country side	34	65%
Rep. Guiné	7	13%
Senegal	1	2%
Total	52	100%

Conclusion

Leprosy remains a relevant neglected tropical disease in Guinea-Bissau, with consistent annual detection and a predominance of multibacillary forms indicating ongoing community transmission. The presence of grade II deformities at diagnosis demonstrates continued challenges in early case detection. Cross border movement, migration from non-endemic regions, and limited health system capacity contribute to epidemiological complexity. Strengthening surveillance systems, improving early diagnostic capacity, and expanding community based interventions are essential for reducing disability and interrupting transmission pathways. Guinea Bissau must enhance integrated approaches targeting neglected tropical diseases to reduce overall public health burden and achieve long term elimination goals.