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Clinical-epidemiological behavior of tuberculosis-HIV coinfection at Simão Mendes National Hospital. Guinea-Bissau, 2024

Comportamiento clínico-epidemiológico de la coinfección tuberculosis-VIH en Hospital Nacional Simão Mendes. Guinea-Bissau, 2024

Doris de la Caridad Herrera Santiesteban [1*]

Candelario Manuel Hernández Barroso [1]

Amanda Camila Corbacho Faulkner [2], Rainel Martínez Quintana [2]

Frank Reydel Suárez Fariñas [2] Shelenys Serrano Rodríguez [2]

[1] Faculty of Medicine "Raúl Díaz-Argüelles García". Guinea-Bissau.

[2] University of Medical Sciences of Matanzas. Faculty of Medical Sciences of Matanzas "Dr. Juan Guiteras Gener". Matanzas, Cuba.

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Corresponding author:
dorismanuel2023@gmail.com

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RESUMEN

Introducción: La coinfección tuberculosis (TB) y virus de inmunodeficiencia humana (VIH) representa una sinergia letal, especialmente en África subsahariana. En Guinea Bissau, la carga de esta coinfección es elevada, pero existen pocos estudios actualizados que caractericen su comportamiento clínico-epidemiológico. **Objetivo:** Caracterizar clínica y epidemiológicamente los casos nuevos de coinfección TB/VIH atendidos en el Hospital Nacional Simão Mendes (HNSM) durante enero-diciembre de 2024. **Métodos:** Estudio observacional, descriptivo, transversal y cuantitativo. Se incluyeron 96 pacientes con diagnóstico de TB y VIH positivo que iniciaron tratamiento antibacilar en el HNSM en 2024. Los datos se obtuvieron de historias clínicas. Se analizaron variables sociodemográficas, clínicas, microbiológicas, inmunológicas y terapéuticas mediante estadística descriptiva. **Resultados:** La edad media fue 31,7 años (DE ±8,2); el grupo menor de 20 años fue el más afectado (37,5 %). Predominó el sexo masculino (52,1 %) y la procedencia de Bissau (91,7 %). Los casos nuevos de TB representaron el 85,4 % y la forma pulmonar el 71,9 %. La baciloscopia fue negativa en el 54,8 % de los pacientes con registro. La media de CD4 fue 198,4 cel/mm³, con 48,4 % <200 cel/mm³. El 86,5 % llevaba ≥5 años en tratamiento antirretroviral (TARV) y todos recibieron TARV concomitante. La tasa de éxito terapéutico fue 37,5 % y el abandono alcanzó 17,7 %. **Conclusiones:** Predominaron adultos jóvenes con inmunosupresión avanzada y alta frecuencia de baciloscopias negativas. El abandono del tratamiento fue elevado. Se requieren estrategias para fortalecer el registro de datos, reducir el abandono y mejorar el diagnóstico microbiológico.

ABSTRACT

Introduction: Tuberculosis (TB) and human immunodeficiency virus (HIV) coinfection represents a lethal synergy, especially in sub-Saharan Africa. In Guinea-Bissau, the burden of this coinfection is high, but few up-to-date studies characterize its clinical and epidemiological behavior. **Objective:** To clinically and epidemiologically characterize new cases of TB/HIV coinfection treated at the Simão Mendes National Hospital (HNSM) during January–December 2024. **Methods:** Observational, descriptive, cross-sectional, and quantitative study. Ninety-six patients diagnosed with TB and HIV who initiated anti-TB treatment at HNSM in 2024 were included. Data were obtained from medical records. Sociodemographic, clinical, microbiological, immunological, and therapeutic variables were analyzed using descriptive statistics. **Results:** The mean age was 31.7 years (SD ±8.2); The under-20 age group was the most affected (37.5%). Males predominated (52.1%), and most were from Bissau (91.7%). New TB cases represented 85.4%, and the pulmonary form accounted for 71.9%. Sputum smear microscopy was negative in 54.8% of registered patients. The mean CD4 count was 198.4 cells/mm³, with 48.4% having counts <200 cells/mm³. 86.5% had been on antiretroviral therapy (ART) for ≥5 years, and all received concomitant ART. The treatment success rate was 37.5%, and the discontinuation rate reached 17.7%. **Conclusions:** Young adults with advanced immunosuppression and a high frequency of negative sputum smear microscopy predominated. Treatment discontinuation was high. Strategies are needed to strengthen data recording, reduce dropout rates, and improve microbiological diagnosis.

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INTRODUCTION

Tuberculosis (TB) remains one of the world's major public health problems due to its morbidity and mortality in adults. It is among the top ten causes of death globally and, since 2015, has caused more deaths than human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) (1). In 2023, the World Health Organization (WHO) estimated 10.6 million new TB cases, of which 1.3 million (12 %) were among people living with HIV, and 1.3 million deaths were recorded, including 167 000 among HIV-positive individuals [1].

TB is the prototypical infection that requires cellular immunity for its control. HIV causes progressive functional impairment of CD4 T lymphocytes, both quantitatively and qualitatively, with the consequent weakening of the cellular immune system. This facilitates the development of TB. Therefore, HIV infection carries an annual risk of developing active TB of 7 to 10 % in an HIV-positive patient, compared to a lifetime risk of 5 to 10 % in a person without HIV [2]. TB/HIV coinfection creates a lethal synergy that accelerates the progression of both diseases [3].

In the African region, the average TB incidence in 2023 was 275 cases per 100,000 population, more than double the global average (134). The proportion of TB cases among people living with HIV exceeds 31 % at the continental level and surpasses 50 % in some sub-Saharan African countries. Guinea-Bissau, located in this region, had an estimated TB incidence rate of 361 per 100,000 population in 2023, and a TB/HIV coinfection prevalence of 35 % among new TB cases. In this country, microbiological confirmation of TB through sputum culture is not routinely performed, so little is known about the clinical and epidemiological characteristics of coinfected patients [4,5].

The convergence of HIV and TB infection poses a threat that increases the likelihood of premature death, especially in low- and middle-income countries. It is well known that people with HIV die more from TB than from any other infectious cause, and this situation is even more dramatic in the developing world, where TB is associated with poverty [3,6]. Coinfection thus appears among the main factors threatening TB control [7]. For this reason, WHO recommendations are aimed at addressing both infections comprehensively, rather than in isolation [1,8].

In Guinea-Bissau, the Simão Mendes National Hospital (HNSM) in Bissau is the national referral center for the care of patients with TB and HIV, through its Outpatient Therapy Center (CTA). However, no published studies characterize the clinical and epidemiological behavior

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of new TB/HIV coinfection cases treated at this hospital in recent years. Based on this, the lack of knowledge regarding the demographic, epidemiological, and clinical profile of patients with TB/HIV coinfection at the HNSM during 2024 was identified as a scientific problem.

The objective was to clinically and epidemiologically characterize new cases of tuberculosis and HIV coinfection treated at the Hospital Nacional Simão Mendes (HNSM) from January to December 2024.

METHODS

Study Type

An observational, descriptive, cross-sectional study with a quantitative approach was conducted at the Simão Mendes National Hospital (HNSM) during 2024.

Population and Sample

The population consisted of all patients diagnosed with a new case of TB and HIV who initiated anti-TB treatment at HNSM between January 1 and December 31, 2024, totaling 96 patients. The entire population (those meeting the inclusion criteria) was included; therefore, no sampling was used.

Inclusion criteria: Patients diagnosed with TB (confirmed by sputum smear microscopy or by clinical-epidemiological criteria according to national guidelines) and a positive HIV test. Initiation of anti-TB treatment at HNSM between January and December 2024.

Exclusion criteria: Incomplete medical records that prevented the extraction of variables of interest. Patients diagnosed with TB who did not have a recorded HIV test.

Diagnostic criteria

Pulmonary tuberculosis: Case confirmed by positive sputum smear microscopy, or case diagnosed by the attending physician based on clinical-epidemiological data and complementary tests (chest X-ray, GeneXpert molecular test when available) [1,2].

HIV/AIDS: Patient with a positive confirmatory test for HIV-1 or HIV-2, with or without antiretroviral therapy (ART) at the time of TB diagnosis. In Guinea-Bissau, the Ministry of Public Health's serial diagnostic algorithm uses rapid tests: the first test is the Determine® HIV-1/2 (Abbott Park, Illinois, USA) with a sensitivity of 97.9–100 % and a specificity of 100 %, and the second confirmatory test is the Uni-

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Gold® (Trinity Biotech) with a sensitivity of 99.8 % and a specificity of 100 % [3].

TB/HIV Coinfection: A patient with a concomitant diagnosis of TB and HIV who initiated anti-TB treatment, regardless of the date of HIV diagnosis.

Study Variables

To achieve the research objective, the following variables were defined and measured, grouped into sociodemographic, clinical, microbiological, immunological, and therapeutic dimensions.

Sociodemographic Variables

Age: The number of years the patient has lived from birth to the date of initiation of anti-TB treatment. This was recorded as a discrete quantitative variable, expressed in years, and analyzed using mean, standard deviation, median, and minimum-maximum range. It was also categorized into age groups (under 20 years, 20-30 years, 31-40 years, 41-50 years, and over 50 years) to facilitate comparison with other studies.

Sex: A dichotomous nominal qualitative variable, classified as male or female according to the medical record, based on biological phenotype. It was expressed as absolute frequencies and percentages.

Origin: Patient's usual place of residence, recorded according to the administrative region of Guinea-Bissau (SAB Region – Bissau, Biombo, Oio, etc.). This was considered a nominal qualitative variable and analyzed using frequencies and percentages.

Tuberculosis-related variables

Tuberculosis case classification by case type: Following the World Health Organization (WHO) definitions, cases were categorized as new (patients who had never received anti-tuberculosis treatment or had received it for less than four weeks) or retreatment (patients who had received anti-tuberculosis treatment for at least four weeks in the past, including relapses, treatment after abandonment, or treatment failure). This was a nominal qualitative variable, expressed as frequencies and percentages.

Tuberculosis location: Classification based on the affected organ or tissue, according to clinical, radiological, and laboratory criteria. Tuberculosis was coded as pulmonary (confirmed by positive sputum smear microscopy or clinical-radiological criteria) or extrapulmonary

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(lymph node, bone, pleural, meningeal, etc.). It was considered a polynomial qualitative variable, presented as frequencies and percentages.

Initial sputum smear microscopy result: Result of the microscopic examination for acid-fast bacilli (AFB) in sputum samples at the time of tuberculosis diagnosis. It was classified as positive (detection of at least one AFB in 100 fields) or negative (absence of AFB). Dichotomous nominal qualitative variable, analyzed as frequencies and percentages.

Variables related to HIV infection

CD4 T lymphocyte count: Number of CD4 cells per cubic millimeter (cells/mm³) recorded at the time closest to the tuberculosis diagnosis (with a maximum difference of three months). It was treated as a discrete quantitative variable, expressed as mean, standard deviation, and median. In addition, it was categorized into three levels: <200 cells/mm³ (severe immunosuppression), 200–499 cells/mm³ (moderate immunosuppression), and ≥500 cells/mm³ (no significant immunosuppression), according to WHO guidelines.

Time to initiation of antiretroviral therapy (ART): The period elapsed from HIV diagnosis to the start of ART, expressed in years. It was operationalized as an ordinal qualitative variable, divided into three categories: less than 1 year (recent initiation), 1 to 4 years, and 5 or more years (early or established initiation). It was presented as frequencies and percentages.

Therapeutic outcome variable

Anti-tuberculosis treatment outcome: A polynomial qualitative variable defined according to the WHO standardized criteria for patients with tuberculosis. The categories were:

- Cured: Patient with negative sputum smear microscopy at the end of treatment (sixth month) and on at least one previous occasion.
- Treatment completed: Patient who completed treatment without evidence of failure but without negative bacteriological confirmation at the end.
- Treatment dropped: Interruption of treatment for two or more consecutive months.
- Treatment failure: Positive sputum smear microscopy at the fifth month or later.
- Deceased: Death from any cause during treatment.
- Transferred: Patient referred to another healthcare facility to continue treatment.

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Ongoing: Treatment not yet completed at the close of the study (only applicable to patients who started therapy in the last months of 2024).

Favorable outcomes (cured + treatment completed) were grouped as therapeutic success, and unfavorable outcomes (treatment dropped + treatment failure + death + transfer with unknown outcome) were analyzed separately.

Clinical management variables

Concomitant use of ART and anti-tuberculosis treatment: A dichotomous nominal qualitative variable indicating whether the patient received both treatments simultaneously (yes/no), regardless of the order in which they were initiated. The frequency of patients receiving ART during tuberculosis treatment was recorded.

Data source and collection instrument

Data were obtained from medical records and official records of the Tuberculosis Control Center (CTA) at the HNSM (Hospital Nacional San Martín). The authors designed an ad hoc data collection form that included all the variables under study. Each patient was identified by a numerical code (from 1 to 96) to ensure anonymization. The information was extracted by the two principal investigators, who performed a double cross-check of the data in a random subgroup of 10 % of the records to minimize transcription errors.

Processing and statistical analysis

Data were entered into an Excel database (Microsoft Office 365) and subsequently exported to the EPI-INFO statistical software, version 7.2.5 (CDC, Atlanta, GA, USA). The analysis included:

Descriptive statistics: For qualitative variables, absolute frequencies and percentages were calculated. For quantitative variables, measures of central tendency (mean, median) and dispersion (standard deviation, minimum-maximum range) were estimated.

No inferential analysis was performed, as this was a descriptive study of the entire population.

The results are presented in tables (editable Word/Excel format) and figures (high resolution, ≥300 dpi), with their respective titles and captions.

Ethical considerations

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The study was guided by the principles of the Declaration of Helsinki (Fortaleza, 2013) and the Belmont Report (autonomy, beneficence, non-maleficence, justice). Express authorization was obtained from the Research Ethics Committee of the Simão Mendes National Hospital (Record No. 012/CE-HNSM/2024) and the hospital's administration. Since only retrospective data from medical records were used, without intervention or patient identification, the Committee waived the requirement for individual informed consent. However, confidentiality was protected by assigning numerical codes and removing all personal information (name, address, medical record number) before analysis. The research data are available upon reasonable request to the corresponding author.

RESULTS

A total of 96 medical records of patients with tuberculosis (TB) and human immunodeficiency virus (HIV) coinfection treated at the Outpatient Therapy Center (CTA) of the Simão Mendes National Hospital (HNSM) between January 1 and December 31, 2024, were reviewed. All patients met the inclusion criteria and constituted the study population.

The mean age of the patients was 31.7 years, with a median of 30 years, indicating a young population. The most affected age group was those under 20 years old, accounting for more than a third of the cases (37.5 %), followed by the 20-30 and 31-40 age groups, each with approximately one-fifth of the patients. Regarding sex, a slight male predominance was observed (52.1 % vs. 47.9 %), with no marked differences (Table 1).

Table 1. Distribution of patients by age and sex

Variable	Category	N	%
Age	Mean (SD)	31,7 (±8,2) años	–
	Median (range)	30,0 (15-64) años	–
	Under 20 years old	36	37,5
	20-30 years old	22	22,9
	31-40 years old	22	22,9
	41-50 years old	10	10,4
	Over 50 years old	6	6,3
Sex	Male	50	52,1
	Female	46	47,9

Source: Medical records.

The patients' origin showed a marked predominance of the SAB Region (Bissau), with 88 patients (91.7 %). This finding reflects the HNSM's

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status as an urban referral center and the likely centralization of TB/HIV coinfection care in the capital (Table 2).

Table 2. Distribution of patients by origin

Procedencia (Región)	N	%
SAB – Bissau	88	91,7
Biombo	4	4,2
Oio	2	2,1
Otras regiones	2	2,0
Total	96	100

Source: Medical records.

New cases of tuberculosis predominated by a wide margin (85.4 %), indicating that most patients had not received prior anti-tuberculosis treatment. Pulmonary involvement was the most frequent, affecting almost three out of four patients (71.9 %). Among extrapulmonary forms, lymph node and bone involvement were the most common, together representing 22.0 % of all cases (Table 3).

Table 3. Distribution according to tuberculosis classification and location

Variable	Category	N	%
Case Type	New	82	85,4
	Retreatment	14	14,6
Location	Pulmonary	69	71,9
	Extrapulmonary lymph node	11	11,6
	Extrapulmonary bone	10	10,4
	Other extrapulmonary	6	6,3

Source: Medical records.

Initial sputum smear microscopy was only performed in 42 patients (43.8 % of the total). Among these, the negative rate was slightly higher (54.8 %), suggesting a greater frequency of paucibacillary forms. CD4 counts were available in 31 patients (32.3 %). Of these, almost half (48.4 %) presented with severe immunosuppression (<200 cells/mm³), and only 16.1% had normal or near-normal values (≥500 cells/mm³). The mean CD4 count (198.4 cells/mm³) falls within the threshold for severe immunosuppression (Table 4).

Table 4. Distribution according to initial sputum smear microscopy results and CD4 lymphocyte count

Variable	Category	N	%
Baciloscopy (n=42)*	Positive	19	45,2
	Negative	23	54,8

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CD4 count (n=31)*	Mean (SD)	198,4 (±112,3) cel/mm³	–
	<200 cel/mm³	15	48,4
	200-499 cel/mm³	11	35,5
	≥500 cel/mm³	5	16,1

Source: Medical records. *Only recorded in the indicated number of patients.

The vast majority of patients (86.5 %) had started ART five or more years before their tuberculosis diagnosis, indicating long-standing awareness of their HIV status. Only a minority (4.2 %) had started ART in the past year. All patients received concurrent ART and anti-tuberculosis treatment, reflecting adherence to integrated management guidelines (Table 5).

Table 5. Distribution according to time of initiation of antiretroviral therapy (ART)

Time from HIV diagnosis to ART initiation	N	%
< 1 year	4	4,2
1 – 4 years	9	9,4
≥ 5 years	83	86,5
Total	96	100

Source: Medical records. Note: 100% of patients received ART concomitant with anti-bacillary treatment.

At the close of the study, 30.2 % of patients had been cured, and another 7.3 % completed treatment without bacteriological confirmation, representing a therapeutic success rate of 37.5 %. However, it is noteworthy that an equally high percentage (30.2 %) were still undergoing treatment, reflecting that many cases were diagnosed in the last quarter of 2024. Treatment dropout affected 17.7 % of patients, a considerable figure that triples the 5 % target recommended by the WHO. Mortality was 8.3 %, and 6.3 % were transferred to other facilities.

Table 6. Distribution according to antibacillary treatment results at the close of the study

Outcome	N	%
Cured	29	30,2
Under treatment (not yet completed)	29	30,2
Discharged	17	17,7
Deceased	8	8,3
Treatment completed (without bacteriological confirmation)	7	7,3
Transferred to another unit	6	6,3

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Total	96	100

Source: Medical records. *Note: The therapeutic success rate (cured + completed treatment) was 37.5% (36/96). Unfavorable outcomes (dropout + death + transferred without follow-up) totaled 31 patients (32.3%), excluding the 29 still undergoing treatment.*

DISCUSSION

Tuberculosis (TB) and human immunodeficiency virus (HIV) coinfection represents one of the greatest challenges for health systems in sub-Saharan Africa. This study, conducted at the Simão Mendes National Hospital (HNSM) in Guinea-Bissau during 2024, provides updated data on the clinical and epidemiological characteristics of 96 coinfected patients. The findings are then interpreted in relation to the existing literature.

The results showed a mean age of 31.7 years and a predominance of the under-20 age group (37.5 %), findings that coincide with those reported in other African countries. In Nigeria, Oshi et al. [8] found a mean age of 32.4 years in coinfected patients, while in Uganda, Chu et al. [10] reported a median of 34 years. This pattern reflects that coinfection predominantly affects young adults of working age and sexually active age, which has significant social and economic implications.

Regarding sex, a slight male predominance was observed (52.1 %), similar to that described in studies from India [11] and South Africa [12]. However, the difference was less pronounced than in other series, which could indicate a higher enrollment of women in diagnostic programs in Guinea-Bissau. There is no solid evidence to explain a sex predisposition in TB/HIV coinfection.

The origin of the cases showed a concentration of 91.7 % in the SAB Region (Bissau). This finding is expected given that the HNSM is a national referral center located in the capital, and it is likely that patients from more remote regions receive care at peripheral centers or are not included in the study. Previous studies in Angola [4] reported similar patterns of centralization.

The predominance of new cases (85.4 %) is consistent with the international literature. Alba Verdecia and Tamayo Castro [14] reported that 89 % of cases were new at a tertiary care center in Luanda, Angola. Retreatment cases (14.6 %) are generally associated with treatment failures, treatment discontinuation, or relapses, and their frequency in this study falls within the expected range for regions with high endemicity [1].

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Pulmonary involvement was the most frequent (71.9 %), which is consistent with multiple studies [8, 11, 13]. However, the proportion of extrapulmonary forms (28.1 %) was higher than that reported in HIV-negative patients (which is usually less than 15–20 %). This is explained by the fact that HIV-induced immunosuppression facilitates hematogenous dissemination of Mycobacterium tuberculosis [23]. In particular, lymph node (11.6 %) and bone (10.4 %) involvement were the most frequent extrapulmonary manifestations, coinciding with the findings described by Sharma et al. [11] in India and by Médecins Sans Frontières [15].

The negative sputum smear microscopy in 54.8 % of registered patients is a relevant finding. Previous studies have shown that patients coinfected with HIV and low CD4 counts are more likely to have negative sputum smear microscopy due to the lower bacterial load and the absence of cavity formation [23,22]. In our series, the mean CD4 count was 198.4 cells/mm³, and almost half (48.4 %) had levels <200 cells/mm³, supporting this association. Stockdale et al. [16] in Kenya found a similar proportion of negative sputum smear microscopy (52 %) in coinfected patients.

The low percentage of patients with recorded sputum smear microscopy (43.8 %) and CD4 counts (32.3 %) is a significant limitation of the study and reflects deficiencies in the recording systems and the availability of diagnostic tests in Guinea-Bissau. A similar situation has been described in other West African countries [17].

The most striking finding was that 86.5 % of patients had been on antiretroviral therapy (ART) for five or more years at the time of tuberculosis diagnosis. This indicates that most had known their serological status for some time, but despite this, they developed active TB, suggesting advanced immunosuppression or a poor response to ART. This phenomenon has been described as "paradoxical tuberculosis" or TB associated with immunosuppression [22]. On the other hand, all patients received ART concurrently with anti-TB treatment, in accordance with WHO recommendations [21], which have been shown to reduce mortality in coinfected patients by up to 40-50 % [19].

The treatment success rate (cured + treatment completion) was 37.5 %, a notably low figure compared to other studies. In Nigeria, Oshi et al. [8] reported a 65.8 % treatment completion rate; in South Africa, Yoko et al. [12] found a 77.3 % success rate; and in Vietnam, Thuy et al. [20] reported a 71% rate. However, it should be considered that in our study, 30.2 % of patients were still undergoing treatment at the close of the study, which partially explains the low success rate. It is

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likely that many of these patients will be classified as cured in subsequent evaluations.

The dropout rate (17.7 %) is concerning and far exceeds the 5 % target set by the Global Tuberculosis Programme [2]. This figure is higher than that reported in Nigeria (9.9 %) [8] and India (8.6 %) [11]. The causes of treatment abandonment in Guinea-Bissau may include geographical barriers, poverty, adverse drug effects, lack of family support, and shortcomings in directly observed therapy (DOT). Qualitative research is needed to identify the specific causes.

The 8.3% mortality rate falls within the range reported in the literature for coinfected patients (4–16 %) [10,11,19], although it is lower than that of some African studies that report up to 25 % mortality in patients with CD4 counts <50 cells/mm³ [22]). Underreporting of deaths may exist in our setting, as discussed in the limitations section.

The main limitations of the study are as follows. First, there was a high proportion of missing data in the medical records: initial sputum smear microscopy was not recorded in 56.2 % of patients, and CD4 counts were unavailable in 67.7 %, which could introduce information bias. Second, the retrospective design does not allow for establishing causal relationships and depends on the quality of the clinical records. Third, at the close of the study, 30.2 % of patients were still undergoing active treatment, so the final results are preliminary. Fourth, the results come from a single urban referral center in Bissau and are not necessarily representative of rural areas of Guinea-Bissau. Fifth, the diagnostic confirmation of tuberculosis was based predominantly on clinical-radiological criteria and sputum smear microscopy, without systematic availability of culture or molecular tests such as GeneXpert. Finally, underreporting of deaths is possible, as some patients who discontinued treatment may have died without being reported to the health system. Despite these limitations, the findings provide valuable information for this resource-scarce setting.

Despite the limitations noted, the results of this study have important practical implications for the national TB/HIV control program in Guinea-Bissau. First, it is necessary to strengthen the recording of clinical and laboratory data, especially initial sputum smear microscopy and CD4 lymphocyte counts, to improve epidemiological surveillance and the quality of information. Second, it is recommended to implement effective strategies to reduce treatment abandonment, such as directly observed treatment (DOT) with psychosocial support and an active follow-up system for patients who miss scheduled appointments. Third, it is a priority to improve access to diagnostic tests such as GeneXpert, particularly for patients with negative sputum smear microscopy but a high clinical suspicion of tuberculosis. Fourth, it is

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suggested that healthcare personnel be trained in the recognition and suspicion of extrapulmonary tuberculosis, especially in patients with advanced immunosuppression (CD4 <200 cells/mm³). Finally, it is recommended to investigate the causes of treatment abandonment through mixed-methods (qualitative-quantitative) studies that allow for the identification of specific barriers and the design of contextualized interventions.

CONCLUSIONS

Among patients coinfected with tuberculosis and HIV at the Simão Mendes National Hospital (2024), young adults under 20 years of age and males predominated, with the majority coming from the capital. Tuberculosis was primarily pulmonary and present in new cases. 54.8 % of sputum smear microscopy tests were negative, associated with a mean CD4 count of 198.4 cells/mm³ and severe immunosuppression in almost half. 86.5 % had known their serological status for ≥5 years, and all received antiretroviral treatment. The therapeutic success rate was low (37.5 %), and the treatment abandonment rate was high (17.7 %). There is a need to strengthen record-keeping, reduce treatment abandonment rates, and optimize microbiological diagnosis.

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AUTHORS' CONTRIBUTIONS

DdlCHS: conceptualization, data curation, formal analysis, research, methodology, supervision, validation, visualization, original draft, revised draft, and editing.

CMHB: conceptualization, formal analysis, research, methodology, validation, original draft, revised draft, and editing.

ACCF: data curation, formal analysis, methodology, validation, original draft, revised draft, and editing.

RMQ: data curation, formal analysis, original draft.

FRSF: visualization, original draft, revised draft, and editing.

SSR: visualization, original draft, revised draft, and editing.

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The authors declare no conflict of interest.

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