

Sociodemographic and clinical characteristics of patients with HIV treated in a hospital in the Colombian Orinoco region 2018-2023

Abstract

Introduction: The human immunodeficiency virus is a worldwide public health problem, with an average number of infected people between 33.1 and 45.7 million and the death of an average of 630 000 people per year. According to the WHO, only 54% of people infected with HIV know they are infected.

Methods: Observational, descriptive, retrospective, retrospective, cross-sectional study of patients who consulted a hospital in the Colombian Orinoquía and who underwent confirmation of HIV diagnosis in the period from 2018 to 2023.

Results: 337 patients were obtained, 72.70% male and 23.30% female; the mean age was 34.89 years (SD \pm 12.63); 94.07% came from urban areas and 5.93% from rural areas; 56.08% were in the HIV stage and 43.92% in the AIDS stage; according to the mechanisms of transmission, heterosexual 70.92%, homosexual 13.06%, bisexual 9.50%, and maternal infant 6.53%; the most frequent opportunistic diseases and/or coinfections were cerebral toxoplasmosis (24.32%), esophageal candidiasis (20.27%), pneumonitis pneumonia (17.57%), pulmonary tuberculosis 13.51%, 89.06% of patients started antiretroviral therapy during hospital stay, mortality reported in this cohort of patients diagnosed in the period from 2018 to 2023 was 8.01%.

Conclusions: It is important to strengthen actions to improve access to health services for patients living with HIV, avoid prolonged stays in hospital care centers, and prevent severe opportunistic infections that require prolonged treatments leading to drug interactions and affecting adherence to treatments.

Keywords: human immunodeficiency virus, viral load, acquired immunodeficiency syndrome, bacterial pneumonia, opportunistic infections

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Abbreviations: AIDS, acquired immune deficiency syndrome; HIV, human immunodeficiency virus

Introduction

Acquired Immune Deficiency Syndrome (AIDS) was reported for the first time in 1981 in the city of Los Angeles, and the human immunodeficiency virus (HIV) was identified as the causal agent. It destroys the cells of the immune system, which generates immunodeficiency. It represents difficulties for timely diagnosis, coverage and adherence to treatment. In addition, the infection has serious consequences for the patient, his family, his social environment and health services.¹⁻⁵ HIV is one of the biggest public health problems worldwide, with an average infected population of between 33.1 and 45.7 million and an average death rate of 630,000 people per year. According to the WHO, only 54% of people infected with HIV know they are infected (6–8%). In Colombia, there has been an increase in cases, from 14,064 cases in 2018 to 18,410 in 2022, and in the first quarter of 2023, 4,716 new cases were already reported; For the Orinoquía region of Casanare, 102 cases were reported in October 2023,⁶⁻⁸ with an incidence of 22.94 cases per 100,000 inhabitants, of which 84.3% belong to the urban area, 69.6% male.^{9,10} The aim is to determine the sociodemographic and clinical characteristics of patients diagnosed with HIV infection and treated in a hospital in the Colombian Orinoquía during the period 2014–2023.

Methods

Study and Participants: Retrospective study that included all patients treated in a Colombian level III hospital who were diagnosed with HIV in the period 2018-2023.

Population selection criteria

Inclusion criteria: All patients seen between 2018 and 2023 who were diagnosed with HIV and were reported in the Epidemiological Surveillance System.

Exclusion criteria: patients who were suspected of having HIV and were ruled out by diagnostic tests.

Data collection: Data collection was carried out from epidemiological notification forms that contained the variables of relevance to the study, including sociodemographic aspects, clinical, therapeutic and outcome characteristics. The database was registered in Excel version 2013 and analyzed in this same statistical package.

Definition of variables: The following variables were recorded: sociodemographic: age, gender, origin, ethnic identification and gender identity and clinical variables: clinical stage, diagnostic tests, transmission mechanism, opportunistic infections, coinfections and mortality.

Statistical analysis: The univariate analysis was carried out using a descriptive statistic on the selected population, determining absolute and relative frequencies in the categorical variables. In the case of quantitative variables, measures of central tendency (mean, median) and measures of dispersion (mean, median) were calculated. Standard deviation and interquartile range).

Ethical considerations: The project was categorized as risk-free research, based on what was established in Resolution 008430 of 1993, and was also formally endorsed by the Hospital's Bioethics and Research Committee.

Results

Description of the participants: They correspond to 337 patients who were diagnosed with HIV in a Colombian hospital, their distribution by sex and age groups (Table 1) and who were admitted through the emergency department.

Sociodemographic characteristics: The mean age was 34.89 years

(SD ± 12.63) (IQR: 26-43.50) (95% CI: 33.54-36.24), 94.07% came from urban areas and 5.93% from rural areas, 68.84% of patients They had subsidized health insurance and 31.16% belonged to the contributory regime, the reported gender identity was male 70.92%, female 28.49%, and transgender 0.59%. Regarding ethnic identification, it was found that one indigenous patient (0.30%), one Gypsy patient (0.30%), 1.19% were black, and 98.22% of the patients belonged to other groups.

Clinical features: The reported clinical stage of the patients when diagnosed with HIV was as follows: 56.08% HIV stage and 43.92% AIDS stage, according to the application of types of diagnostic tests, it was evident that ELISA (enzyme immunosorbent assay) was performed. 53.41% of patients, rapid test 39.76%, Western Blot 5.04% and viral load 1.78%. The following transmission mechanisms of the HIV virus were identified: heterosexual 70.92%, homosexual 13.06%, bisexual 9.50% and maternal and child 6.53%; The frequency of opportunistic diseases and/or coinfections that patients with AIDS stage presented are presented in (Table 2).

Table 1 Distribution by age and sex groups

Age groups: Range 1-75 years n=337	Sex			
	M		F	
	Absolute frequency n=245	Relative frequency %	Absolute frequency n=92	Relative frequency %
1- 10 years	3	1.22	1	1.09
11-20 years	12	4.9	7	7.61
21-40 years	161	65.71	60	65.22
41-60 years	60	24.49	21	22.83
>61 years	9	3.67	3	3.26
Total	245	100	92	100

Source: SIVIGILA (Public Health Epidemiological Surveillance System) 2018-2023: Own elaboration.

Table 2 Opportunists in patients with AIDS stage n=148

	Absolute frequency n=148	Relative frequency %
Cerebral toxoplasmosis	36	24.32
Esophageal candidiasis	30	20.27
Pneumocystis pneumonia	26	17.57
Pulmonary tuberculosis	20	13.51
HIV encephalopathy	19	12.84
Recurrent pneumonia (more than 2 episodes in a year)	8	5.41
Extrapulmonary histoplasmosis	6	4.05
Kaposi sarcoma	6	4.05
Extrapulmonary TB	4	2.7
Herpes zoster in multiple dermatomes	4	2.7
Extrapulmonary cryptococcosis	4	2.7
airway candidiasis	2	1.35
Immunoblastic lymphoma	2	1.35
Cytomegalovirus retinitis	1	0.68
Disseminated histoplasmosis	1	0.68
Burkitt lymphoma	1	0.68

Source: SIVIGILA (Public Health Epidemiological Surveillance System)2018-2023: Own elaboration.

Patients were found with coinfection with viruses B and C (Hepatitis), each with 0.89% respectively, 89.06% of the patients were started on antiretroviral therapy during their hospital stay. 100% of patients reported having not donated blood in the last twelve months. The mortality reported in this cohort of patients diagnosed in the period from 2018 to 2023 was 8.01%.

Discussion

Despite the joint efforts of government entities, the transmission of the HIV virus is still evident, behaviors and behaviors that indicate that the population is aware of this disease are not perceived, however, a greater number of people are evident in treatment with specific therapy and the admission of patients in the AIDS stage to emergency services

has decreased.^{11–15} The results of this study indicate that the infection is more frequent in males and in the population of young adults aged 21 to 40 years from urban areas, data that correlate with the majority of descriptive studies from different geographic regions.^{13–17}

The data obtained in this research break the classic stereotype that HIV mostly affects men who have relationships with men (MSM), they represent only 13.06%, while the heterosexual population represents 70.92%, however, it could occur that the population belongs to a society that still stigmatizes these sexual preferences and impacts real data.¹⁸

Opportunistic diseases occupy a relevant place in studies associated with HIV/AIDS; in the population studied, 148 patients presented opportunistic diseases, among which cerebral toxoplasmosis occupies first place, followed by esophageal candidiasis, pneumocystis pneumonia and tuberculosis opportunistic diseases affect the quality of life of patients, data very similar to studies in Latin America.^{19–21}

This investigation reported 27 deaths between the years 2018-2023, with pneumonia being the first cause of death, and among these, Pneumonia due to *Pneumocystis jirovecii*, followed by *Mycobacterium tuberculosis*. They corresponded to patients who were admitted in the AIDS stage, which reflects the existence of serious patients with advanced HIV disease who were not linked early to primary care or who did not know they had the infection.²¹

Conclusion

It is advisable to strengthen the active search for cases of patients with HIV for their timely diagnosis and treatment and thus cut the chain of transmission. Likewise, it is necessary to prioritize HIV as a disease of relevant importance in the entire population. In addition, it is important to strengthen actions that generate improvement in access to health services for these patients and avoid prolonged stays in centers of hospital care, especially due to exposure to biological agents that cause serious opportunistic infections that require prolonged treatments, leading to drug interactions and affecting adherence to treatments. The strengths of this study lie mainly in the inclusion of all patients in whom the diagnosis of HIV infection was confirmed in the study period.

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None.

Conflicts of interest

The autor declares there is no conflict of interest.

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