

Psychosocial and Clinical Characteristics and Psychiatric Co-morbidity Among Men and Women with HIV/AIDS under Medical Treatment at a Tertiary Health Care Center in Cali, Colombia

Alejandro Castillo¹
Hernán G. Rincón-Hoyos²
John E. Lewis³
Juan D. Vélez⁴
Sonia Bersh⁵
Frank Penedo⁶
Gail Shor-Posner⁷
Neil Schneiderman⁸

Abstract

Introduction: Better understanding of psychosocial and health care needs of complex HIV/AIDS patients may facilitate disease management and virologic control. *Objectives:* To examine the behavioral, psychosocial, and co-morbid characteristics of HIV/AIDS illness in men and women being followed at a tertiary health care center in Colombia. *Methods:* A sample of HIV+ patients, 114 men and 29 women, was selected for review of clinical records. *Results:* Men were older (40 vs. 32 yrs.) and more likely to be employed (83 vs. 50%). Of those reporting sexual preference, 33% of men and 100% of women indicated being heterosexual. A higher percentage of men (34%) had CD4 count < 200 cells/mm² when compared with the women (21%). More men than women had opportunistic infections (75 vs. 48%) and more men tended to be on complex medication regimens (68 vs. 48%). Viral load data was

1 Psychiatry and Psychosomatic Medicine Service, Clínica Fundacion Valle del Lili, Cali, Colombia.

2 CES School of Medicine; Clinica Fundacion Valle del Lili, Cali, Colombia; Fogarty Fellow University of Miami Miller School of Medicine, Center for Health Promotion & International Research, Miami, Florida, United States.

3 University of Miami Miller School of Medicine, Department of Psychiatry, Miami, Florida, United States.

4 Infectious Diseases Service, Clinica Fundacion Valle del Lili, Cali, Colombia.

5 Psychiatry and Psychosomatic Medicine Service, Clínica Fundacion Valle del Lili, Cali, Colombia.

6 University of Miami, Department of Psychology, Miami, Florida, United States.

7 University of Miami Miller School of Medicine, Center for Health Promotion & International Research, Department of Epidemiology & Public Health, Miami, Florida, United States.

8 University of Miami, Department of Psychology, Miami, Florida, United States.

available for 53% of the cases, half of which had > 400 copies/ml. Only 40% of patients attended every scheduled 3-month visit. Less than one-quarter (22%) of the sample was diagnosed by a psychiatrist with a mental disorder and only a small proportion (one-fifth) had a psychiatric follow-up. *Conclusions:* Our study reveals several important findings among this sample of HIV patients attending a tertiary care private hospital in Cali: (1) the epidemic is rising among women, (2) undetected and under-treated psychiatric illness is highly prevalent, and (3) adherence to scheduled clinical visits is low among patients with a viral load >400 copies/ml. Thus, integrating psychosocial care with behavioral interventions to improve adherence is warranted to counteract these critical issues. An important weakness of this study was that clinical records did not include complete documentation of all variables.

Key words: HIV, acquired immunodeficiency syndrome, mental disorders, psychosomatic medicine, epidemiology.

Título: Características psicosociales y clínicas y comorbilidad psiquiátrica en hombres y mujeres con VIH/sida bajo tratamiento médico en un centro de atención de nivel tres en Cali, Colombia

Resumen

Introducción: Una mejor comprensión de las necesidades psicosociales y de salud de pacientes con VIH/sida de mayor complejidad puede facilitar su manejo y control virológico. *Objetivo:* Estudiar las características de comportamiento, psicosociales y de comorbilidad en la enfermedad por VIH/sida en hombres y mujeres de un centro de atención nivel tres en Colombia. *Método:* Revisión de una muestra de pacientes con VIH+ de 114 hombres y 29 mujeres y de sus historias clínicas. *Resultados:* Los hombres eran de mayor edad (40 vs. 32 años) y estaban empleados (83% vs. 50%). En los que reportaron preferencia sexual, 33% de los hombres y 100% de las

mujeres refirieron heterosexualidad. Un mayor porcentaje de hombres (34%) que de mujeres (21%) tuvo un recuento de CD4 <200 células/mm². Más hombres tenían infecciones oportunistas (75% vs. 48%) y estaban en tratamientos médicos de mayor complejidad (68% vs. 48%). Datos de carga viral estaban disponibles en el 53% de los casos. Solamente 40% asistieron a cada una de las citas trimestrales. El 22% tenía un diagnóstico de enfermedad mental realizado por un psiquiatra, y sólo una quinta parte, seguimiento por psiquiatra. *Conclusiones:* Nuestro estudio revela tres hallazgos importantes para la población que acude a un hospital privado de nivel tres en la ciudad de Cali: (i) la epidemia está aumentando en mujeres, (ii) la enfermedad psiquiátrica no detectada y no tratada es altamente prevalente y (iii) la adherencia a las visitas programadas fue baja en los pacientes con carga viral >400 copias/ml. Por lo tanto, para mejorar adherencia es prioritario integrar el cuidado psicosocial con las intervenciones sobre el comportamiento y así controlar estos críticos aspectos.

Palabras clave: VIH, síndrome de inmunodeficiencia adquirida, trastornos mentales, medicina psicosomática, epidemiología.

Introduction

Colombia is a developing country composed of diverse groups of people with special characteristics and HIV health care must address this need both globally and locally (1,2). Colombian medical providers are confronting specific challenges: increasing HIV prevalence, limited HAART treatment, poor adherence, and underreporting of cases (3). Psychiatric illness and substance abuse, in the presence of HIV/AIDS, known as the mutually-interacting

triple diagnosis (4), compound the seriousness of these issues.

An overriding concern associated with optimal treatment involves the necessity for diligent adherence to HIV treatment in order to reduce viral burden (5). Several factors have been reported to impact adherence, including environmental conditions, treatment regimen, level of illness, and individual aspects (6). Behavioral factors affecting adherence vary in every group and specific actions are necessary for appropriate control (7).

Studying the psychosocial characteristics of HIV/AIDS patients can provide insight into overcoming potential clinical and public health problems. In a recent review, Della Pena stated that, "it is apparent that psychiatric issues play a central role in the HIV epidemic" (6). Psychological disturbances and psychiatric disorders are highly prevalent in HIV/AIDS populations of all socioeconomic status (SES) groups. They can also antecede illness or be reactive to its diagnosis, increase the risk of acquiring and transmitting the virus, and impart negative consequences on treatment, such as poor adherence (8).

Differences in gender are very important in the HIV/AIDS epidemic. Within the biopsychosocial framework of the illness, important genetic, hormonal, and metabolic differences have been noticed. Gender is part of the construction of identity and is a socio-cultural product that influences the use of health services

and attitudes and beliefs about infectious and chronic illnesses (9-11). Some investigators have mentioned gender differences in the progression of the illness, related morbidity, and response and adverse effects to anti-retroviral therapy (9-11). In Colombia, HIV initially affected mostly men and they comprise 81% of all AIDS cases reported to the national health authorities (12). The prevalence found among young people (aged 15-24 years) and pregnant women ranges from 1.2-1.3% in regions of Santander and Valle to 2.4% in Atlántico (13).

The objective of this study was to descriptively analyze the behavioral, psychosocial, and co-morbid characteristics of HIV/AIDS illness in men and women being followed at a tertiary care center in Cali, Colombia. Patient records were reviewed by the medical team and the prevalence and treatment of psychiatric disorders were documented over the past five years (2001-2005). Findings from this review will be utilized to improve the medical services to suit the psychosocial needs of the HIV infected population in this center.

Materials and Methods

The Fundación Valle del Lili Hospital is a tertiary medical center in Cali and provides care mostly for insured patients. A total of 662 HIV positive men and women have been followed at the infectious diseases service over the past five years. A

random number sampling method was used to select the participants for the study, and records of 143 inpatient and outpatient HIV infected patients were retrospectively reviewed.

An instrument to directly obtain sociodemographic and clinical information from the medical records was designed by two of the investigators (AC, HGR). To protect anonymity, the instrument did not include either name or clinical record number and was composed of three parts: (i) sociodemographic variables, (ii) HIV/AIDS variables, and (iii) mental disorders care and follow-up variables (see tables 1 and 2).

The protocol was reviewed and approved by the Fundación Valle del Lili Hospital Institutional Review Board. Members of the Psychiatry and Psychology Service at Fundación Valle del Lili reviewed the medical charts. An information and training session took place prior to the chart review process to discuss the study instrument and establish guidelines. In order to prevent errors, one of the investigators (AC) kept an independent database and assigned the charts for review according to the sampling list.

Statistical Analyses

The random sample was determined using EPI-INFO 2002, based on the 25% rate of mental illness prevalence in HIV/AIDS (14) with a worse prospective result of 18.5% and a reliability of 95%. Data were

analyzed using EPI-INFO 2002 and p values < 0.05 were considered statistically significant. Following descriptive and frequency checks for errors and outliers, continuous variables were compared using the non-parametric Kruskal-Wallis test (non-normal distribution). Dichotomous (yes vs. no) or other categorical variables were analyzed with chi square to calculate odds ratios (OR) and confidence intervals (CI).

Results

Demographics

The study sample of 143 records, included 114 men (80% of the total sample) and 29 women, ranging in age from 18 to 74 years with a mean of 38.4 ± 10.9 . Men were significantly older than women (40.0 ± 10.2 years vs. 32.4 ± 11.6 years; $H[1] = 14.7$, $p < 0.01$). Most of the men were employed, single, of middle SES, living with their families and had some form of health insurance, including the basic obligatory insurance, which covers HIV treatment (Table 1). Education data was excluded from the final analysis since only 54% of the sample reported this information. More women than men were unemployed (OR: 4.13, CI: 1.6-10.7, $\chi^2[3] = 11.5$, $p < 0.01$), and most were living with their family (Table 1). More women than men reported having a stable relationship or a history of one partner, although the difference was not significant.

HIV Transmission and Disease Status

Route of transmission was mostly undisclosed for men (78%), however 60% of women reported transmission through sex, and 40% were undisclosed. Men had more opportunistic infections (OR: 3.1, CI: 1.3-7.3, $p < 0.01$) and there was a trend to receive more complex pharmacological regimens (OR: 2.26, CI: 0.94 - 5.4, $p < 0.05$).

The mean time since HIV diagnosis was more than three years and similar among men and women, though the time period was greater in the men (45 vs. 35 months). Viral burden levels were available in only 76 clinical charts (53%). The mean value for this specific group was 66,430 copies and about half (47%) had less than 400 copies/ml. Mortality was reported for 8% of the sample and did not differ by gender.

Only 40% of all patients attended every scheduled 3-month visit with their infectious disease specialist and half (49%) of all subjects took three or more prescribed drugs five times a day (i.e., a complex pharmacological regimen). The CD4 count in the group of patients under complex pharmacological treatment was < 200 cells/mm³ in 47% (32/68), 200-500 cells in 31% (21/68), and > 500 cells in 10% (7/68). Data was not recorded in the remaining 12% of the sample (Tabla 1).

Psychiatric Disorders and Sexual Behavior

Mental illness had been diagnosed by a psychiatrist in 22% of

cases with the most frequent diagnosis being depressive disorders and only one-fifth of those with a psychiatric diagnosis were followed-up by a psychiatrist. The proportion of men vs. women with psychiatric diagnosis was similar.

Almost 70% of the men's medical charts did not include sexual preference data, compared to 21% in women. Of those reporting sexual preference, 33% of men and 100% of women indicated a heterosexual preference. In the sub-population of men that have sex with men (MSM), a greater probability for acquiring the illness by sexual transmission was shown (OR: 5.85, 95% CI: 2.1-16.2, $\chi^2(2) = 13.04$, $p < 0.01$), as was mental illness diagnosed by a psychiatrist (OR: 3.16, 95% CI: 1.15-8.65, $\chi^2(1) = 5.32$, $p = 0.01$). The correlation between mental illness and development of adverse effects to medication approached statistical significance (OR: 2.07, 95% CI: 0.87-4.96, $p = 0.07$) (Tabla 2).

Discussion

This retrospective study examined sociodemographic and HIV disease characteristics by gender, sexual behavior, and the prevalence of psychiatric illness in a random sample of HIV infected patients attending a medical center in Cali, Colombia (Fundación Valle de Lili Hospital), over the past five years. As was expected, most study participants had good insurance coverage for HIV/AIDS treatment because

Table 1. Socio-demographic Characteristics by Gender

	Male n = 114 (80%)	Female n = 29 (20%)	p value
Mean Age in years	40 (SD = 10.2)	32.4 (SD = 11.6)	0.0001
Marital Status			
Single	66 (58)	7 (24)	
Married	35 (31)	16 (55)	
Widow	1 (1)	3 (10.5)	
Divorced	6 (5)	3 (10.5)	
Unknown	6 (5)	...	0.28
SES			
Low	25 (22)	12 (41)	
Middle	81 (71)	13(45)	
High	3 (2.5)	...	
Country side	2 (2)	3 (10.5)	
Unknown	3 (2.5)	1 (3.5)	...
Occupation			
Unemployed	4 (3.5)	11 (38)	
Non formal employment	35 (30.5)	7 (24)	
Employed	58 (51)	7 (24)	
Unknown	17 (15)	4 (14)	0.002
Insurance			
Basic (POS)	84 (74)	24 (82.5)	
Subsidized	2 (2)	-	
Private Insurance	8 (7)	2 (7)	
Other	5 (4)	1 (3.5)	
Unknown	15 (13)	2 (7)	0.81
Social Support			
Lives alone	12 (11)	1 (3.5)	
Lives with family	68 (60)	25 (86)	
Lives with other people	5 (4)	1 (3.5)	
Unknown	28 (25)	2 (7)	0.11

Note: For categorical variables, the number in parentheses is the percentage within each gender. POS is the obligatory government regulated health plan.

Table 2. Sexual Behavior and Psychiatric Disorders by Gender

	Male n = 114 (80%)	Female n = 29 (20%)	p value
Time since diagnosis (months)	45.3 (SD = 35.0)	35.5 (SD = 30.7)	0.11
Transmission route (%)			
Sex	24 (21)	17 (59)	
IV drugs	1 (1)	...	
Unknown	89 (78)	12 (41)	...
Diagnosed mental illness			
Yes	26 (23)	6 (21)	
No	88 (77)	23 (79)	0.059
Type of Mental Illness			
Anxiety Disorders	2 (2)	...	
Depressive Disorder	12 (10.5)	5 (17)	
Bipolar Disorder	1 (1)	...	
Cognitive Disorder	7 (6)	1 (3.5)	
Psychotic Disorder	3 (2.5)	...	
Other	2 (2)	1 (3.5)	
None	87 (76)	22 (76)	NS
Diagnosis Disclosure to			
Family	23 (20)	6 (21)	
Partner	20 (17.5)	8 (28)	
Friends and others	4 (3.5)	3 (10)	
Unknown	67 (59)	12 (41)	NS

Note: For categorical variables, the number in parentheses is the percentage within each gender.

the hospital is a reference center and in order to have access to services it is necessary to have either private or government-regulated insurance. We noted three important findings in the study, including: (i) the increasing HIV/AIDS epidemic in women, (ii) the prevalence of mental illness in the HIV/AIDS population, and (iii) the percentage of men and women not adherent to treatment.

Although recent Colombian national statistics indicate that wo-

men comprise a growing segment of the HIV-infected population with a current 3:1 ratio (13), our results showed a lower than expected prevalence of women being followed at our clinic (13). This may be related to the referral of patients to the center based on severity of illness, given that men as a group have had the disease for a longer period of time and are more likely to have been referred. Nonetheless, in our sample a substantial number of wo-

men attended the center, suggesting the need to establish gender-specific criteria among difficult cases in order to provide optimal care. In relation to the epidemic among women in Cali, Collazos et al. recently pointed out that women of all SES levels have similar risk factors, such as “infidelity in their monogamous and heterosexual relationship” and “low power of decision and low condom use” (15).

The authors recommended increasing programs specifically designed to empower this vulnerable group. In their ten-year review article, Shah and Bradbeer state, “Women still have unmet needs in the field of HIV” (16). We would add that countries like Colombia with the cultural presence of “machismo” (male chauvinism) still have a long way to go in order to turn things around. In the meantime, the epidemic will most likely continue increasing both in men and in women, and in tertiary care centers of Colombia it is expected that the number of cases will increase correspondingly.

Our data indicated a 22% prevalence of mental illness in this sample, of which only a small percentage were followed-up by a psychiatrist or other mental health professional. Similar proportions of women and men were diagnosed with mental illness, though the prevalence of mental illness and depression was lower than reported in the literature (6), and differed with unpublished data from another study done in Cali involving ambu-

latory care HIV/AIDS patients (17). That study revealed a prevalence of 50% of depressive symptoms using the CES-D as a screening tool (17). These differences may reflect variations in screening strategies, which are more sensitive than specific, and a low detection and referral of psychiatric illness by the medical team in the present study. In a previous study done in our hospital, Rincón et al. found that the medical surgical team was not very effective in detecting and treating psychiatric illness in patients at the intensive care unit (18).

Our data suggest that MSM have a greater probability of being diagnosed with a mental illness, and possibly an increased chance of disease progression (19). We also found that MSM have a greater probability of disease transmission through sex, perhaps due to unsafe sexual behaviors (20). In addition, psychological disturbances may impede patients from obtaining full benefits from their treatment, contributing to reduced employment, increased probability of drug abuse, and the engagement of unsafe sex, and consequently, potentially increasing the spread of the epidemic (6).

Patients with psychiatric diagnosis were more compliant than other patients with scheduled medical visits. This unexpected finding could be associated with greater family support and possibly more private insurance among psychiatric patients. Employment tended to be lower in psychiatric

patients, which is consistent with other research and suggests that the mentally ill lack the capacity to sustain a competitive job (21,22). Since psychiatric illness is not well-covered by basic insurance, private insurance may be a necessity, requiring further consideration of this issue in future studies.

The high percentage of men and women patients with viral load levels of >400 copies/ml, who did not attend their scheduled visits, is alarming. This suggests the need to design future studies to determine factors associated with low adherence in HIV populations in our region, including chronic mental illnesses and substance abuse. This information will be critical for the successful implementation of individual and public health level interventions that have a behavioral and social component and improve adherence in different HIV subpopulations. Recent studies have shown the impact of adherence support programs (23,24). However, the cost/benefit ratio of applying expensive behavioral interventions to all HIV/AIDS patients on antiretroviral treatment, compared to such treatment among patients with unmanageable viral load levels, is unknown at this time. Since the patient population at our center is unique because of higher disease severity, a positive cost/benefit ratio may be likely with an expensive behavioral and social intervention.

From the clinical perspective, we believe that designing and im-

plementing an HIV/AIDS comprehensive medical and behavioral treatment program would contribute to improving the care of HIV patients in tertiary care centers like the Fundacion Valle del Lili. The care of HIV/AIDS complex patients requires a multidisciplinary approach with the possibility of support from different psychiatric and behavioral specialties, which is known as integrated care (25,26). Recently, an integrated model of psychosocial care for HIV, cancer, and other catastrophic diseases in tertiary care centers in Colombia has been proposed (27). This model consists of graded psychosomatic medicine care supported by a psychosocial case manager, who offers targeted services to patients and their families (27).

We recognize important weaknesses in this study. The clinical records at the time of the study were not standardized documents and variables like educational level, viral load, sexual orientation, and route of disease acquisition were inconsistently recorded. In addition, the results may not be generalized to settings lacking tertiary care services, but the present findings illustrate the importance of multidisciplinary efforts in the treatment and care of HIV-infected patients in all hospitals and institutions.

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Correspondencia

Hernán G. Rincón-Hoyos

Fundación Valle del Lili

Cra. 98 No. 18-49, Cali, Colombia

hernanrincon@mail.com