

Depression in women infected with HIV

Depressão em mulheres infectadas pelo HIV

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Original version accepted in Portuguese

Abstract

Objective: The number of women with HIV infection has been on the rise in recent years, making studies of the psychiatric aspects of this condition very important. The aim of this study was to evaluate the prevalence of major depression in women with HIV infection. **Method:** A total of 120 women were studied, 60 symptomatic (with AIDS symptoms) and 60 asymptomatic (without AIDS symptoms). Sociodemographic data were collected, and depressive disorders were identified. The instruments used to evaluate the depressive disorders were the SCID, DSM-IV, 17-item Hamilton depression scale, Hamilton depression scale for nonsomatic symptoms and the Beck depression scale. **Results:** The prevalence of major depression was 25.8% and was higher in the symptomatic group than in the asymptomatic group ($p = 0.002$). **Conclusions:** The prevalence of major depressive episodes in women with HIV infection is high, and women with AIDS-related symptoms are more often depressed than are those who have never presented such symptoms.

Keywords: AIDS serodiagnosis; Adjustment disorders; Female; Classification; Statistics and numerical data

Resumo

Objetivo: Devido ao aumento do número de mulheres infectadas pelo HIV, no Brasil e no mundo, torna-se necessária a realização de estudos que abordem os aspectos psiquiátricos dessa população. Esse estudo tem como objetivo avaliar a prevalência de depressão maior atual e outros transtornos depressivos em mulheres infectadas pelo HIV e comparar essa prevalência entre um grupo de pacientes sintomáticas e outro de assintomáticas. **Método:** Utilizou-se um desenho de estudo transversal que avaliou 120 mulheres portadoras do HIV divididas em dois grupos de 60 pacientes, de acordo com a presença, em algum momento da vida, de sintomas relacionados à AIDS (sintomáticas e assintomáticas). Foram avaliadas variáveis sociodemográficas e variáveis relacionadas aos transtornos depressivos. Foram utilizados na avaliação psiquiátrica dos transtornos depressivos o SCID-DSM-IV, escala de Hamilton-17, escala de Hamilton não somática e o inventário de Beck. **Resultados:** Os resultados mostram uma prevalência de 25,8% de depressão maior atual, sendo maior nas pacientes sintomáticas em relação às assintomáticas ($p = 0,002$). **Conclusões:** Os resultados mostram uma alta prevalência de depressão nas mulheres infectadas pelo HIV.

Descritores: Sorodigagnóstico de AIDS; Depressão reativa; Feminino; Classificação; Estatística e dados numéricos

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Introduction

As of 1990, the profile of HIV infection in Brazil and worldwide changed, and a progressively greater number of women began to become infected. Brazilian epidemiological data show a decrease in the male/female ratio of AIDS cases over the years. Between 1980 and 1990, the mean ratio was 6.5 men to each woman. From 1991 to 2001, this mean ratio decreased to 2.4 men to each woman. In the years of 2001, 2002 and 2003, the male/female ratio reported was 1.7 men to each woman. According to the most recent epidemiological bulletin, 79,814 cases of AIDS in women have been reported since 1982.¹

Due to this epidemiological characteristic, the study of psychiatric and psychological disorders in HIV-positive women has become increasingly more necessary.

In evaluating depressive symptoms in HIV-positive individuals, it is important to identify:

1) A depressive episode secondary to the clinical disease or to the use of medication. It is known that the HIV presents tropism for the central nervous system (CNS), resulting in neurological lesions, directly or indirectly related to the immunologic deficiency it causes, facilitating the development of opportunistic infections and neoplasia in the CNS;

2) a primary major depressive episode, triggered by becoming ill and the consequences thereof;

3) an adjustment reaction presenting depressive symptoms that represent a response to the stress situation caused by the disease itself.

The psychic repercussions of HIV infection are at the same time similar to and different from those of other organic pathologies. This is because, in addition to being a severe, lethal and incurable disease that places the contaminated individual face to face with the possibility of death, the AIDS epidemic has caused, since the beginning, violent reactions related to discrimination and social exclusion.

It is known that stressful events increase by three to five times the risk of developing depression, and that the common triggers of depressive episodes include the following: divorce or separation from a love relationship; serious financial problems; physical disease; problems at home; being laid off; marital problems or problems in an affective relationship; conflicts or difficulties at work; and negative events involving a close person, such as a relative or a close friend. Individuals with HIV very often find themselves in such situations. Since HIV is a sexually transmitted disease, HIV-positive individuals face affective and sexual relationship difficulties, as well as marital conflicts and divorces. The reactions of social exclusion and the physical development of the disease itself result in conflicts at work and even dismissals that can lead to more serious financial problems. All of these stress-inducing factors result in quite frequent depressive episodes in HIV-positive individuals.

Various studies have estimated the lifetime prevalence of depression in these individuals to range from 22% to 45%.² A meta-analysis of ten studies comparing the prevalence of depression in HIV-positive individuals to that seen in HIV-negative individuals concluded that the infected individuals were diagnosed with major depression 1.99 times more often than were uninfected individuals.³

There are few studies on the subject, particularly involving women, and their results are conflicting. In a five-year longitudinal study, Brown et al. evaluated 43 women infected with HIV and serving in the United States Air Force. Only two patients (5%) developed depression during this period.⁴

However, another study, involving 17 HIV-positive women, found the prevalence of depression in their sample to be 29%.⁵ In a study carried out in Brazil, the authors evaluated 47 women infected with HIV and found the prevalence of depression to be 27.5%.⁶ An issue discussed in the literature, but remains to be clarified, is whether or not the prevalence of depression increases after the onset of AIDS-related symptoms. In a four-year follow-up study of 112 male homosexuals, no increase in the prevalence of depression was found concomitant with the advance of the disease and the onset of symptoms.⁷ Similar results were found in another study, also involving male homosexuals. Similarly, the authors of the latter study found that the incidence of depressive episodes in symptomatic patients was comparable to that seen in asymptomatic patients.⁸ Maj et al. conducted a comparative study of the prevalence of psychiatric disorders in HIV-positive patients with AIDS-related symptoms, HIV-positive patients without AIDS-related symptoms and HIV-negative patients. A greater prevalence of depression was found in the group of symptomatic HIV-positive individuals when compared to the group of uninfected individuals.⁹ A meta-analysis of five studies comparing the prevalence of depression between symptomatic and asymptomatic HIV-positive male homosexual patients revealed no significant difference between the two groups.³

It is important to emphasize that, to date, there have been no studies evaluating the prevalence of depressive disorders over the course of the disease and consequent onset of symptoms in women with HIV.

The objective of the present study was to assess the prevalence of depression in HIV-positive women and to compare a group of symptomatic patients (presenting AIDS-related symptoms) with a group of asymptomatic patients (presenting no AIDS-related symptoms).

Method

This study was carried out through a partnership between the Department/Institute of Psychiatry and the Department of Infectious-Contagious and Parasitic Diseases of the Universidade de São Paulo School of Medicine *Hospital das Clínicas* at the Clinical Division of Infectious-Contagious and Parasitic Diseases Extension Center for the Treatment of HIV-positive Patients, known as the *Casa da AIDS* (AIDS House), of the same hospital.

1. Study design

This was a cross-sectional study, involving women under treatment at the AIDS House, and consists of an interview of, on average, 30 minutes, evaluating: 1) sociodemographic variables; 2) psychiatric aspects of current and past depressive disorders.

2. Sample

The women were selected to participate in the study upon their arrival at the outpatient clinic to see an infectious diseases doctor. The first five patients who presented for treatment, by order of arrival, were invited to participate in the interview, and it was explained to them that this procedure would not affect the scheduled times of their consultations. The interviews were conducted in medical consultation rooms and were performed by the main researcher and two trained interviewers. Each interview lasted an average of 30 minutes.

We applied the following exclusion criteria: 1) diagnosis of dementia associated with AIDS or other cognitive deficits that impaired an adequate evaluation. Such diagnoses were made through clinical evaluation; 2) diagnosis of dependence on

psychoactive substance in the last two years. This diagnosis was also made through clinical evaluation; 3) any other clinical impediment to the application of the interview.

Women who were dependent on psychoactive substance were excluded from this study because they constitute a specific population that is quite different from the overall population of women with HIV. The prevalence of depressive disorders among substance-dependent women is higher than that seen in the general population.

A total of 120 HIV-positive women were interviewed and were divided into two groups of 60 patients each, according to the presence or absence of a history of AIDS-related symptoms. Such symptoms were defined according to the CDC criteria for the classification of the phase of infection.¹⁰

- Group 1: Asymptomatic (category A: asymptomatic patient)
- Group 2: Symptomatic (category B: symptomatic patient; and category C: AIDS-defining diseases).

It is of note that an HIV-positive individual with a history of presenting constitutional symptoms or AIDS-defining diseases was classified as a category B or C patient (symptomatic patient), even if that individual did not present those clinical profiles at the time of this study.

Five women were excluded: two because they presented chemical dependency; and three because their clinical status made it difficult for them to participate in the interview.

Seven women (four asymptomatic and three symptomatic) declined to participate in the study. Five of the seven claimed they lacked the time to participate, and two preferred not to talk about themselves.

The sample size was calculated based on an $\alpha = 5\%$ and a $\beta = 20\%$. The estimated prevalence of depression was 50% in group 2¹¹ and 25% in group 1.⁶

3. Ethical aspects

Prior to the study outset, this research project was reviewed and approved by the Ethical Standards and Regulations Committee of the Universidade de São Paulo School of Medicine *Hospital das Clínicas*.

All study procedures, as well as the related ethical aspects, such as professional privacy safeguards and psychiatric follow-up in case of referral for psychiatric treatment, were explained to participants, all of whom gave written informed consent.

The clinical treatment of those who declined to participate in the study was not affected in any way.

4. Collection of data

Sociodemographic aspects, as well as the history and intensity of current and past depressive disorders, was evaluated during the interview.

1) Sociodemographic evaluation

The following variables were evaluated:

- a) age: quantitative variable;
- b) marital status: categories - single, married, separated or widowed;
- c) schooling: categories - did not complete elementary school, completed elementary school, completed high school, earned a college degree;
- d) work situation: categories - working, unemployed, on welfare or retired (on social security).

2) Psychiatric evaluation

The objective of the psychiatric evaluation was to determine the presence of diagnoses of current and past mood disorders, particularly depressive disorders.

To that end, the following instruments were applied:

a) SCID-DSM-IV: the SCID was the diagnostic instrument used to diagnose the mood disorders in this study. The SCID is a semi-structured interview that diagnoses principal mental disorders according to the DSM-IV criteria.¹² In this study, only the following diagnoses of the mood disorders module were evaluated:

- i) current major depressive episode;
- ii) previous major depressive episodes (number);
- iii) dysthymic disorder;
- iv) mood disorder due to general medical condition;
- v) substance-induced mood disorder

and the diagnoses of:

- i) adjustment disorder with depressive mood (adjustment reaction module);
- ii) minor depressive disorder;
- b) 17-item Hamilton depression scale

The 17-item Hamilton scale of depression was used in this study to quantitatively evaluate the depressive symptoms.¹³

c) Nonsomatic Hamilton depression scale:

This scale is derived from the 17-item Hamilton depression scale and contains only a few items that evaluate affective and cognitive depressive symptoms, excluding the somatic symptoms that, when present, can result from clinical illness. Since the patients interviewed were all HIV-positive, it became necessary to use an evaluation instrument that would not include symptoms that might be secondary to the consequences of the underlying pathology.

d) Beck Inventory

The Beck Inventory is a self-rating scale and was used in this study to evaluate the intensity of depressive symptoms based on patient perception.¹⁴

Questions were posed regarding current or previous suicidal ideation or suicide attempts, and the depressed patients were asked about factors related to the depressive episode. This last question was formulated in the following way:

"Do you relate your depression to some factor or event in your life? If so, please specify."

The answer to this question was categorized and was later analyzed quantitatively.

5. Statistical analysis

A descriptive analysis of all the variables studied was carried out, as was a comparison between the symptomatic and asymptomatic patients.

In the analysis of the quantitative variables, descriptive statistics were presented (mean, standard deviation, minimum, median and maximum).¹⁵

The descriptive analysis of the qualitative variables was made using incidence tables for the study of their distribution.

To compare the distribution of quantitative variable data with normal theoretic distribution (Gaussian distribution), we used the nonparametric Kolmogorov-Smirnov test.¹⁶

The Student's t-test was used to compare the results for the symptomatic group with those for the asymptomatic group in relation to a quantitative variable when the normality assumption was satisfactory, and the nonparametric Mann-Whitney test was used when appropriate.¹⁶

This same comparison of the results obtained for the two groups (symptomatic and asymptomatic patients) was performed for the qualitative variables using the chi-square test for homogeneity¹⁵ or Fisher's exact test.¹⁶ The latter was used in 2×2 tables in which the expected number of

patients in any cell of the table was lower than 5, as well as in situations in which the chi-square distribution could not be applied.

The level of statistical significance adopted in this study was 5%.

Results

Most (46.7%) of the patients were married women, 34.2% had not completed elementary school, 51.7% were working, and 29.2% had no children. The mean age was 36.1 ± 8.71 years. There was no significant difference between the asymptomatic and symptomatic groups in terms of mean age ($p = 0.851$), nor was there any difference between the groups regarding marital status ($p = 0.144$), schooling ($p = 0.274$) or number of children ($p = 0.490$).

Only the variable employment status was found to correlate with the presence of symptoms ($p = 0.043$), and it can be observed that the percentage of working patients was significantly higher among the asymptomatic patients than among the symptomatic patients.

These sociodemographic variables are presented in Table 1.

1. Psychiatric evaluation

A total of 31 patients (25.8%) were diagnosed with major depressive episode at the time of the interview, and 5 (4.2%) were diagnosed with other affective disorders. Two patients were diagnosed with dysthymic disorder, two were diagnosed with adjustment reaction with depressed mood, and one met the criteria for minor depressive disorder.

The prevalence of current major depression in this sample was lower in the group of the asymptomatic patients (13.3%) than in the group of symptomatic patients (38.3%). This difference was statistically significant ($p = 0.002$), as can be seen in Table 2.

Despite the high prevalence of depression found in this study (25.8%), only 11.7% of the patients were receiving antidepressants. It was observed that the symptomatic patients (16.7%) used antidepressants more frequently than did the asymptomatic patients (6.7%), although this difference was less than statistically significant ($p = 0.08$) (Table 2).

Regarding the variable current suicidal ideation, 21.7% of the symptomatic patients had recently contemplated suicide, compared with only 10% of the asymptomatic patients. This difference was also less than statistically significant ($p = 0.09$) (Table 2).

Table 1 – Distribution of the symptomatic and asymptomatic patients according to sociodemographic variables

Variable	Phase of infection				Total		p*
	Asymptomatic		Symptomatic		n	%	
	n	%	n	%			
Marital status							0.144
Single	14	23.3	19	31.7	33	27.5	
Married	28	46.7	28	46.7	56	46.7	
Widow	9	15.0	11	18.3	20	16.7	
Separated	9	15.0	2	3.3	11	9.2	
Schooling							0.274
Elementary school incomplete	17	28.3	24	40.0	41	34.2	
Elementary school complete	13	21.7	16	26.7	29	24.2	
High school complete	22	36.7	13	21.7	35	29.2	
College degree earned	8	13.3	7	11.7	15	12.5	
Employment status							0.043
Working	37	61.7	25	41.7	62	51.7	
Unemployed	18	30.0	22	36.7	40	33.3	
On welfare/retired	5	8.3	13	21.7	18	15.0	
Number of children							0.490
None (0)	19	31.7	16	26.7	35	29.2	
1	11	18.3	18	30.0	29	24.2	
2	11	18.3	11	18.3	22	18.3	
3	19	31.7	15	25.0	34	28.3	

*chi-square test

Table 2 – Distribution of the symptomatic and asymptomatic patients by current major depression, suicidal ideation and use of antidepressants

Variables	Phase of infection				Total		p*
	Asymptomatic		Symptomatic		n	%	
	n	%	n	%			
Current major depression							0.002
Yes	8	13.3	23	38.3	31	25.8	
No	52	86.7	37	61.7	89	74.2	
Use of antidepressants							0.088
Yes	4	6.7	10	16.7	14	11.7	
No	56	93.3	50	83.3	106	88.3	
Current suicidal ideation							0.080
Yes	6	10.0	13	21.7	19	15.8	
No	54	90.0	47	78.3	101	84.2	

*chi-square test

A total of 58 women (48%) had experienced at least one major depressive episode. Of those, 22.4% presented depression prior to being diagnosed as HIV-positive, 77.6% presented depression after being diagnosed, and 82.8% had previously experienced only one major depressive disorder. The lifetime prevalence of depression in these patients was 60% (Table 3).

The prevalence of past depressive episodes was slightly higher among the symptomatic women (50%) than among the asymptomatic women (46.7%). Nevertheless, this difference was not significant ($p = 0.715$), and the same occurred with regard to depression prior to diagnosis ($p = 0.648$), the number of previous depressive episodes ($p = 0.732$), and previous suicidal ideation (before and after diagnosis; $p = 0.178$) (Table 3).

Most of the patients with current affective disorder (75%) related their symptoms to some fact or event. Most of those (63%) related their symptoms to their HIV infection and its consequences.

Other factors less frequently related to depressive symptoms were death of a partner (reported by four patients), unemployment (reported by two patients) and affective separation (reported by five patients) (Table 4).

The mean score on the Hamilton scale was 5.73 for the asymptomatic patients and 8.2 for the symptomatic patients, a difference that was statistically significant ($p = 0.015$). The mean values on the nonsomatic Hamilton scale were also higher in the symptomatic group (mean = 4.7) than in the asymptomatic group (mean = 2.47). As expected, the difference between the two groups was statistically significant ($p < 0.001$). On the Beck Inventory, the symptomatic women again presented a higher mean score than did the asymptomatic women (15.3 and 9.3, respectively). This difference was also statistically significant ($p = 0.008$) (Table 5).

Discussion

Most of the women evaluated in this study had had little schooling (did not complete elementary school), were married and were productive members of the labor force. The mean age of these patients was 36.1 years. These characteristics are in agreement with those reported for the majority of women with AIDS in Brazil.¹ Being married and having limited schooling increases the vulnerability of this population to HIV infection, since these women have less access to information about the disease and about preventive methods, as well as

Table 3 – Distribution of the symptomatic and asymptomatic patients according to the variables related to a history of major depressive episodes

Variables	Phase of infection				Total		p*
	Asymptomatic		Symptomatic		n	%	
	n	%	n	%			
History of at least one major depressive episode							0.715*
Yes	28	46.7	30	50.0	58	48.3	
No	32	53.3	30	50.0	62	51.7	
Depressive episode prior to the HIV diagnosis							0.648*
Yes	7	25.0	6	20.0	13	22.4	
No	21	75.0	24	80.0	45	77.6	
Not applicable: 62							
Number of previous depressive episodes							0.732**
1	24	85.7	24	80.0	48	82.8	
2 or more	4	14.3	6	20.0	10	17.2	
Not applicable: 62							
History of suicidal ideation							0.178*
Yes, before the diagnosis	10	16.7	4	6.7	14	11.7	
Yes, after the diagnosis	12	20.0	17	28.3	29	24.2	
No	38	63.3	39	65.0	77	64.2	

*chi-square test

**Fisher's exact test

Table 4 – Distribution of the symptomatic and asymptomatic patients by factors related to the current affective disorder

Variable	Phase of infection				Total		p*
	Asymptomatic		Symptomatic		n	%	
	n	%	n	%			
Factors related to the current affective disorder							0.999
Yes	9	75.0	18	75.0	27	75.0	
No	3	25.0	6	25.0	9	25.0	
Not applicable: 84							
HIV infection related to the current affective disorder							0.683
Yes	5	55.6	12	66.7	17	63.0	
No	4	44.4	6	33.3	10	37.0	
Not applicable: 93							

*Fisher's exact test

Table 5 – Descriptive measurements and statistical test comparing the mean scores on the depression scales in relation to the phase of infection

Depression Scale	Phase of infection	Mean	Standard deviation	p-value*
17-item Hamilton	Asymptomatic	5.73	5.62	0.015
	Symptomatic	8.2	7.8	
Hamilton nonsomatic	Asymptomatic	2.47	3.02	< 0.001
	Symptomatic	4.7	3.94	
Beck	Asymptomatic	9.3	8.3	0.008
	Symptomatic	15.3	12.6	

* *Mann-Whitney test*

having more difficulty in employing such methods in their relations with their husbands or partners.

The characteristics of this sample are similar to those of the sample evaluated in another Brazilian study that attempted to identify a correlation between depression and the level of social support received. That study sample was also composed mostly of HIV-positive married women, with a mean age of 36.1 years old and low levels of education, differing from our sample only in the item employment status, since most of women evaluated by those authors were unemployed.⁶

However, there have been other studies that evaluated samples of HIV-positive women with quite different sociodemographic characteristics, such as lower mean age¹⁷ and predominantly single.¹⁸ The variability of the results is likely related to the differences between the study samples and between the periods in which the studies were carried out. This shows the heterogeneity of the female population affected by HIV in different regions of the world and at different periods in time.

The prevalence of major depressive episodes found in the present study was 25.8% at the time of the interview, and the lifetime prevalence of such episodes was 60%. These data show that depressive episodes are much more frequent in HIV-positive women than in the female population in general, in which the current prevalence and lifetime prevalence of depression are 11.1% and 25%, respectively.¹⁹

Studies of depression in HIV-positive women present varying results. In 1993, Brown et al. evaluated 43 HIV-positive women, who were not substance-dependent, observing that the prevalence current major depression was 5%.⁴ In a study conducted three years later, other researchers diagnosed depression in only 1.9% of their sample of HIV-positive women (which also excluded those who were substance-dependent).²⁰ The principal explanation for the low prevalence of depression in these studies was the specificity of the sample and the fact they did not include women who were dependent on psychoactive substances. However, other investigations also in which such patients were excluded have obtained quite different results, such as that of Morrison et al., who found a 19.4% prevalence of current depression in 93 HIV-positive women studied in 2002. Comparing that group with a group of 62 uninfected women, the authors concluded that the prevalence of depression is four-fold greater in HIV-positive than in HIV-negative women.²¹

Studies using only quantitative scales of depressive symptoms in the psychiatric evaluation found high indices of depressive symptoms in the population affected by the HIV. In a study involving 101 patients evaluated using the Hospital Anxiety and Depression Scale, 70.3% presented high levels of anxiety,

and 43% demonstrated depressive symptoms that were interpreted as depression.²² It should be emphasized that, in our study, the intensity of the current depressive symptoms ranged from mild (according to the 17-item Hamilton) to moderate (according to the Beck Inventory) and that the distribution curve of the nonsomatic Hamilton scale scores followed the distribution of the two other scales, thereby showing that the physical symptoms evaluated with these other instruments did not result in a bias in the final results. The high prevalence of depression and depressive symptoms found in this population is probably a consequence of the difficulties related to HIV infection. In the present study, most patients diagnosed with current depression reported that they related their symptoms to some fact or event, most frequently to their HIV infection. As examples of the stress-inducing situations experienced by these patients, there is the fear of dying, the actual physical suffering secondary to the opportunistic diseases, the social prejudice and the side effects of the antiretroviral treatment.

These factors, in addition to the depression itself, can also predispose to the emergence of suicidal thoughts. The prevalence of suicidal thoughts or suicide attempts at the time of the interview was 15.8%.

In 2000, the group led by Kalichman evaluated the prevalence of suicidal thoughts in HIV-positive individuals of both genders (mean age, 56 years). The authors concluded that 26% of the patients presented suicidal thoughts at the time of the interview. They found a higher prevalence of suicidal ideation among the men, particularly among the homosexual men, who presented AIDS-related symptoms, experienced depressive symptoms and had little social support.²³ It is possible that the higher prevalence of suicidal ideation found by those authors, compared to that presented in the present study, is attributable to the inclusion of male homosexuals in the sample.

Depressive disorders are quite often recurrent, which makes it important to evaluate past episodes and relate them to the current ones. A large proportion of the women studied (48%) presented at least one previous major depressive episode, typically after being informed of their diagnosis. Only 22.4% of the women with a history of depression had developed this symptomatology before the diagnosis. Atkinson et al. studied depressive symptoms in HIV-positive male homosexuals and obtained different results, demonstrating that 64.7% of the depressed patients had presented at least one depressive episode after being diagnosed with HIV infection.⁸

Another study involving women yielded similar results. The authors found a history of major depression in 47% of the sample, most depressive episodes having occurred after the HIV diagnosis.²¹

These data corroborate our finding that most of the depressed patients associated their symptoms with issues related to the HIV infection and its consequences.

In the present study, a history of AIDS-related symptoms was found to correlate positively with current major depression. In other words, the symptomatic patients presented depressive episodes more frequently than did the asymptomatic ones.

There are some possible explanations for this result. Experiencing AIDS-related symptoms (currently or in the past) per se is already an important negative event faced by these women, not only because of the physical development of the disease itself, but also because of the stigma attached to individuals with AIDS, whose main symptoms are: weight loss, hair loss and other physical changes associated with

immunodeficiency. In addition, upon becoming ill, the individual is confronted with the diagnosis and can no longer deny it. It is also known that negative life events are significant risk factors for the development of a major depression episode, which could explain the fact that, in the present study, presenting symptoms of illness was found to correlate with depression.²⁴

Another explanation for this result might be the influence of depressive symptoms on the development of the disease. This hypothesis was proven in a seven-year prospective study evaluating 765 HIV-positive women. The authors found that those women who presented chronic or intermittent depressive symptoms developed AIDS more rapidly than did those not presenting such symptoms.²⁵

Other researches proved that depressive symptoms, the depression itself and stressful events are associated with quantitative and qualitative alterations of the immunological system, which could explain the more rapid progression into AIDS.²⁶⁻²⁷

This is the first study comparing the prevalence of major depression in symptomatic HIV-positive women to that of asymptomatic HIV-positive women. Similar, previous studies involved male homosexuals and did not demonstrate a positive correlation between depression and AIDS-related symptoms.^{3,7-9}

This suggests that AIDS symptoms trigger depressive episodes more often in women than in male homosexuals.

This study presents some limitations:

1) the cross-sectional study design only made it possible to demonstrate a correlation between depression and AIDS-related symptoms, without allowing any conclusions to be drawn regarding risk factors;

2) the characteristics of the selected sample (women under treatment at the AIDS House, having regular consultations with an infectious diseases doctor and having time available to participate in a study) might preclude the extrapolation of our results to other groups of HIV-positive women.

Conclusions

The results of this study allow us to conclude that:

1) the prevalence of current major depressive episodes in HIV-positive women was 25.8%, much higher than the prevalence seen in the female population in general;

2) the prevalence of one or more previous episodes of major depression was 48%, and most such episodes occurred after the patient had been diagnosed with HIV infection. This value is also higher than that found in the female population in general;

3) the prevalence of current major depressive episodes was higher among the symptomatic patients than among the asymptomatic patients. Scores on the 17-item Hamilton scale, the nonsomatic Hamilton scale and the Beck Inventory scale were also higher among the symptomatic patients than among the asymptomatic patients.

The results of this study underscore the importance of providing appropriate psychiatric and psychological assistance to this population, not only for treatment but also for the prevention of depressive episodes.

Patients in which the HIV infection has progressed to AIDS deserve more careful evaluation regarding depressive symptoms, as well as appropriate diagnosis and treatment of major depressive episodes.

Our results also indicate the need for further study of this issue, not only due to the high prevalence of depressive disorders found but also because of the possible consequences that depression can have on quality of life in such patients, as well as on the evolution of the HIV infection.

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