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Psychiatric morbidities in human immunodeficiency virus (HIV) positive patients

Abstract

Background: The HIV/AIDS epidemic has existed for over two decades in India. The mental health needs of people infected with HIV has to be evaluated and looked after properly by mental health professionals. **Aim and objectives:** This study was carried out with the aim to find out psychiatric morbidity in patients infected with HIV so that a proper evaluation and comprehensive management can be planned to improve the overall quality of life of these people. **Methodology:** One hundred patients infected with HIV attending anti-retroviral therapy (ART) clinic, before starting ART, were included in the study. They were screened for presence of psychiatric morbidity on a structured proforma containing sociodemographic details, and inclusion and exclusion criteria for the study. The diagnosis of HIV positive was based on seropositive status of ELISA for HIV and psychiatric diagnosis was based on ICD-10. Rating scales (HAM-A, HAM-D, Y-BOCS, and BPRS) were used to assess the severity of the psychiatric illness. Chi-square test, t-test, and Pearson's correlation coefficient were used for analysis of data. **Results:** Majority of the patients (42%) belonged to younger age group (21-30 years). Percentage of females (59%) infected with HIV was higher than males (41%). Most of the patients (71%) belonged to lower socioeconomic status and 92% got infection through sexual contact. Psychiatric morbidity was detected in 62% of the patients – 40% had depressive episode, 12% had generalized anxiety disorder, and ten per cent had adjustment disorder. A positive correlation was observed between duration of illness and HAM-D score. **Conclusion:** High percentage (62%) of psychiatric morbidity in HIV positive patients indicates that psychiatric evaluation of HIV positive individuals must be carried out by expert mental health professionals and comprehensive management must be planned for better quality of life.

Keywords: AIDS. Mental Health. Depression. Anxiety. Adjustment Disorders.

Adya Shanker Srivastava[1], Raj Kumar[2], Madhukar Rai[3], Maheshwar Nath Tripathi[4], Jai Singh Yadav[5], Achyut Kumar Pandey[6]

[1]Professor, Department of Psychiatry, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India, [2]Senior Resident in Psychiatry, Central Jail, Tihar, New Delhi, India, [3]Professor, Department of General Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India, [4]Consultant Psychiatrist, Mahadeva Neuropsychiatry Centre, Kashi Vidyapeeth, Varanasi, Uttar Pradesh, India, [5]Associate Professor, Department of Psychiatry, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India, [6]Associate Professor, Department of Psychiatry, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

Correspondence: Dr. Raj Kumar, Flat No. F-25/79, Greenview Apartment, Sec. 03, Rohini, New Delhi-110085, India. rk3134@gmail.com

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INTRODUCTION

Patients infected with human immunodeficiency virus (HIV), the causative agent of acquired immunodeficiency syndrome (AIDS), have high rates of psychiatric morbidity.[1] Being diagnosed with HIV infection is a traumatic experience for most of the people. It is not only infective and potentially fatal but it also carries social stigma. The perception of the disease as being the affliction of those with lesser virtues, unwillingness to talk about sex, drug use, and lack of knowledge about the disease add to the stress of this chronic and debilitating disease. Psychological impact and psychiatric morbidity associated with HIV infection has received considerable attention in the last decade due to their effect on an individual's personal, sexual, occupational, and social life.[2]

Review of literature

HIV infection and AIDS is a spectrum of conditions.[3,4] HIV is a retrovirus that primarily infects the components of the immune system such as CD4+ T cells.[5]

HIV infection and psychiatric disorders have a complex relationship. The information of being HIV infected could result in psychiatric disturbance as a psychological consequence of the infection or because of the effect of HIV on brain. Though risky sexual behaviour is the commonest reason behind HIV transmission in India, intravenous (IV) substance abusers sharing needles are also at high risk.[6] Use of substances like alcohol, opioids, cocaine etc. can lead to disinhibition and unprotected sex with multiple partners.[7]

Among HIV patients, clinical depression is the most frequently observed psychiatric morbidity.[8] Rates of depression are substantially higher in HIV infected drug abusers.[9] Most of the studies have revealed that depressive illness is the most common psychiatric disturbance in both asymptomatic and symptomatic HIV infections. Its prevalence appears to be approximately twice that of a normal community sample and it rises with disease progression.[9,10] HIV-related studies from the United States have reported an annual prevalence of major depressive disorder (MDD) as

36%.[11,12] The prevalence of depression has been reported as two to 56% in sub-Saharan Africa[13] and ten to 40% in India.[14] Suicidal ideation is common in HIV positive patients;[15,16] a number of variables, including male gender, homosexual orientation,[17] health factor, and onset of physical complications[15,18] have been implicated.

Other psychiatric disturbances reported are generalized anxiety disorder[19] and adjustment disorder with anxious mood. AIDS phobia,[20] psychosis,[21,22] and substance abuse have been reported as significant comorbidity in HIV positive patients.[23,24]

As HIV most likely penetrates the central nervous system (CNS), a proportion of HIV patients may develop cognitive disorder, termed as mild neurocognitive disorder (MND) which manifests as reduction in speed of information processing, impairment in attention, and difficulty in learning and recollecting new information.[25,26] Delirium secondary to CNS impairment and AIDS Dementia Complex (ADC), also known as HIV encephalopathy[27] have also been reported in HIV positive patients.

Aim and objectives

This study was carried out with the aim to find out psychiatric morbidities in patients infected with HIV. After proper psychiatric evaluation, a better management can be planned for overall improvement of quality of life of these patients.

METHODOLOGY

This study was conducted in Sir Sunder Lal Hospital, Department of Psychiatry, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India. Patients infected with HIV were collected from anti-retroviral therapy (ART) clinic of Department of Medicine of the hospital.

One hundred HIV positive patients, before starting ART, were included in the study. The diagnosis of HIV positive was based on seropositive status of enzyme-linked immunosorbent assay (ELISA) test for HIV. The psychiatric evaluation was done on the basis of structured proforma containing sociodemographic details, inclusion and exclusion criteria for the study, and detail physical and mental status examination. Diagnosis of psychiatric morbidity was based on the tenth revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10)[28] and severity of the condition was assessed on the basis of relevant rating scales: the Hamilton Anxiety Rating Scale,[29] the Hamilton's Rating Scale for Depression,[30] the Brief Psychiatric Rating Scale,[31] and the Yale-Brown Obsessive Compulsive Scale.[32]

This study was approved by the ethics committee of the Institute of Medical Sciences and ethical clearance was taken before starting the study. A written informed consent was taken from all the patients explaining the nature of the study. Analysis of data was based on statistical methods using chi-square test, t-test, p-value for significance, and correlation coefficient for correlation between different variables.

RESULTS

Majority of the patients (42%) belonged to younger age group (21-30 years). Thirty nine per cent patients belonged to the age group of 31-40 years and 19% patients were in the age group 41-50 years. Mean age of the patients was 34.2±7.62 years.

Percentage of females (59%) infected with HIV was higher than males (41%). Majority of the patients were Hindu (98%), married (96%), and belonged to lower socioeconomic status (71%). Thirty nine per cent patients belonged to rural area, 41% had education up to middle (sixth to tenth) standard, and 50% were working as housewives (Table 1). Mode of acquiring HIV infection was maximum (92%) through heterosexual contact. Two per cent patients reported

Table 1: Sociodemographic profile (N=100)

Variable	%
Age (Years)	
21-30	42
31-40	39
41-50	19
Sex	
Male	41
Female	59
Religion	
Hindu	98
Muslim	2
Marital status	
Single	4
Married	96
Residence	
Rural	39
Semi-urban	35
Urban	26
Education	
Illiterate	24
Primary	19
High school	41
Intermediate	6
Graduation	10
Occupation	
Homemaker	50
Farmer	8
Driver	25
Other	17
Socioeconomic status	
Lower	71
Middle	29

infection after blood transfusion and six per cent patients did not know how they got the infection. Majority (85%) of the patients had stage one of clinical stage of HIV infection, only 15% had stage two of infection. Mean duration of illness was 5.17±3.67 weeks.

The psychiatric evaluation revealed that 62% patients were having psychiatric morbidity: 42% had depressive episode, 12% were suffering from generalized anxiety disorder, and ten per cent had adjustment disorder. Thirty eight per cent patients did not have any psychiatric morbidity.

Among the depressive episode group, patients at stage two of HIV infection had higher score of depression (mean 14.47±4.08) than those at stage one (mean 10.05±4.69) and the difference was statistically significant (p<0.001) (Table 2). Significant association and a positive correlation were found between duration of illness and severity of depression (p<0.0009 and p<0.0001 respectively) (Tables 3 and 4). Twelve per cent patients had reported suicidal ideation also.

In generalized anxiety disorder group also, patients at clinical stage two of HIV infection had higher anxiety score (mean 13.9±4.49) than patients at stage one (mean 12.3±3.42), though the difference was statistically non-significant (p<0.115) (Table 5). The mean anxiety score gradually increased with duration of illness and a positive correlation was observed between duration of illness and severity of anxiety; but, the differences were not significant (p<0.765 and p>0.843 respectively) (Tables 6 and 7).

DISCUSSION

The present study was carried out with the aim to find out psychiatric disturbances in patients infected with HIV. Social stigma and fatal outcome of the disease is perceived as stressful factors and may predispose the individual to various psychiatric morbidities.

The mean age of the patients in this study was 34.2±7.62 years and most of the patients belonged to age group 21-40 years (42% in 21-30 years age group and 39% in 31-40 years of age group). Shanthi *et al*.[33] and Reddy *et al*.[34] have also reported similar findings. Nebhinani *et al*.[35] have also reported mean age of study subjects as 33.6+7.7 years. In the present study, majority of the patients were females (59%). However, other studies by Shanthi *et al*.[33] and Nebhinani *et al*.[35] have reported preponderance of males in their studies. Most of the patients in our study were Hindu (98%), married (96%), educated up to tenth standard (41%), and belonged to lower socioeconomic status (71%). Similar findings have been reported by Nebhinani *et al*.[35], Shanthi *et al*.,[33] and Ravneet Kaur and Krishna Sahithi J,[36] also.

In the present study, mode of acquiring HIV infection in majority of the patients was sexual contact (92%). Two per cent patients reported infection after blood transfusion and six per cent patients reported that they did not know how they got the infection. Nebhinani *et al*.[35] had reported infection through heterosexual contact in 98%, and homosexual and bisexual contact in one per cent each. Shahani *et al*.[37] had reported infection through 60.5% heterosexual and 31.5% homosexual contacts. Eight per cent got infection through sharing injection with drug abusers.

In the present study, psychiatric morbidity was observed in 62% patients infected with HIV. The percentage of patients having psychiatric morbidity is quite high and needs attention of mental health professionals. Out of 62% patients, 42% had depressive episode, 12% had generalized anxiety disorder, and eight per cent had adjustment disorder. Thirty eight per cent patients did not have any psychiatric morbidity. Ravneet Kaur and Krishna Sahithi J[36] have reported psychiatric morbidity in 68.33% of patients and 33.3% patients had depressive disorder. In our study, 12% patients had reported suicidal ideation during the illness. Ravneet Kaur and Krishna

Table 2: Clinical stage of HIV and mean score of depression

Variable	HIV stage 1	HIV stage 2	t	p
HAM-D score	10.05±4.69	14.47±4.08	3.43	<0.001

HIV=Human immunodeficiency virus, HAM-D=Hamilton's Rating Scale for Depression

Table 3: Duration of illness and mean score of depression

Duration (weeks)	HAM-D	p
1-4	7.14±2.17	<0.0009
>4-8	13.21±4.496	
>8-12	14.46±3.433	
>12	10.5±4.5	

HAM-D=Hamilton's Rating Scale for Depression

Table 4: Correlation between duration of illness and severity of depression

Variable	Correlation coefficient (r)	p
Duration of illness	0.467	<0.0001
HAM-D		

HAM-D=Hamilton's Rating Scale for Depression

Table 5: Clinical stage of HIV and mean score of anxiety

Variable	HIV stage 1	HIV stage 2	t	p
HAM-A	12.3±3.42	13.9±4.49	1.59	<0.115

HIV=Human immunodeficiency virus, HAM-A=Hamilton Anxiety Rating Scale

Table 6: Duration of illness and mean score of anxiety

Duration (weeks)	HAM-A	p
1-4	12.3±3.14	<0.765
>4-8	12.5±3.9	
>8-12	13.4±4.38	
>12	11.5±0.5	

HAM-A=Hamilton Anxiety Rating Scale

Table 7: Correlation between duration of illness and severity of anxiety

Variable	Correlation coefficient (r)	p
Duration of illness	0.02	>0.843
HAM-A		

HAM-A=Hamilton Anxiety Rating Scale

Sahithi J[36] have reported suicidal ideation in 23.33% patients. Suicidal ideations may be due to reaction to HIV diagnosis (greater hopelessness), disease factor (AIDS-related conditions), and neuroticism.[17]

A significant positive correlation was observed between stage two of HIV infection and severity of depression. Similarly, a significant positive correlation between duration of illness and severity of depression was also found.

In the present study, 12% patients were detected as cases of generalized anxiety disorder. Ravneet Kaur and Krishna Sahithi J[36] had reported anxiety disorder in 15% patients. Similarly, Reddy *et al*.[34] have also reported anxiety disorder in 12% patients in their study. Patients with stage two of HIV infection had higher anxiety score (13.9±4.49) than patients with stage one (12.3±3.42) though the difference was statistically non-significant. No significant correlation could be observed between duration of illness and severity of anxiety in patients.

Limitations

This study was hospital-based and only those patients who had come for ART were screened for psychiatric disturbance. The HIV high-risk group in general population must also be screened for any possible disturbance in their mental health.

Conclusion

The present study has revealed significantly higher prevalence of psychiatric morbidity in HIV positive patients. These cases were not screened earlier and hence, no psychiatric help was offered to them. All the patients with HIV infection must be screened for presence of comorbid psychiatric morbidity, and a comprehensive management for their physical and mental health must be planned for better quality of life.

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