

Neuropsychiatric Morbidity and the Risk of Suicidal Behaviour in HIV/AIDS Patients

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Abstract : *Mental health and HIV are closely interlinked. A number of previous studies attempted primarily in the western countries have found a robust link between HIV/AIDS and psychiatric illness, including increased suicidal risk. The current study attempts to examine the relationship between HIV infection and the presence of a psychiatric illness, especially suicidal risk in the same sample population. 129 HIV positive cases along with 50 demographically similar controls participated in the study. All samples underwent detailed psychiatric assessment using ICD-10 criteria and further subjected to SCAN (Schedule for clinical assessment in neuropsychiatry) and BSS (Beck's scale for suicidal ideation). The HIV positive cases were found to be having significantly higher rates of psychiatric diagnosis (n=66,51%) as well as almost three times increased suicidal risk as compared to HIV negative controls. The findings highlight the susceptibility of HIV patients to having a psychiatric illness as well as an increased suicidal risk.*

Keywords : Neuropsychiatric Morbidity, Suicidal Behaviour, HIV/AIDS

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INTRODUCTION

HIV is the pandemic of our times. Recent estimates suggest that more than 30 million people are living with HIV infection worldwide and more than 2.5 million in our country. Infected individuals face the prospect of social stigma, long term physical discomfort and illness and eventual death. Given this state of chronic stress for infected individuals, researchers have been naturally concerned about their psychological adjustments to living with this disease.¹

Mental health and HIV/AIDS are closely interlinked. Mental health problems, including substance use disorders, are associated with increased risk of HIV infection and AIDS and interfere with their treatment and conversely some mental disorders occur as a direct result of HIV infection.

Neuropsychiatric and neurological signs and

symptoms have been described since the earliest reports on AIDS. The neuropsychiatric manifestation were attributed to psychological reactions to a systemic illness, the effects of psychosocial stressors associated with the disease or the consequences of opportunistic infections or neoplasm within the central nervous system (CNS). It is now recognized that the neuropsychiatric manifestations of HIV infections can result from the direct effects of HIV on the brain and CNS or from indirect effects, such as opportunistic infections or tumors associated with immunosuppression, cerebrovascular disease, systemic toxicity and complications of antiretroviral therapy.²

Psychiatric symptoms often go unrecognized and untreated. Emerging evidence suggest that certain symptoms, such as depression may be

associated with an increase in mortality rate among HIV seropositive women³ and with disease progression in seropositive men.⁴ Earlier controlled studies found that the prevalence of mood disorders was higher among asymptomatic HIV seropositive men than in the general population but was similar to that of HIV seronegative gay men.⁵

Another study found the most common psychiatric manifestation to be adjustment reaction in the form of anxiety and depressive illness.⁶

The WHO cross cultural study on neuropsychiatric aspects of infection with HIV-1 revealed a significantly higher prevalence of current mental disorders in symptomatic seropositive person compared with seronegative control.⁷

A study on suicidal ideation in HIV infection using BDI and GHQ scales revealed significantly higher total suicidal ideation scores were present in the CDC stage IV group compared with the HIV-negative group.⁸

Another study found decreased rates in AIDS group as compared to asymptomatic or early stage infection.⁹⁻¹⁰ The incidence of lower rates reported in more recent investigation has been interpreted as a possible consequence of better psychiatric management in HIV infected subjects, lessened social stigma and wider availability of new antiretroviral drugs.¹¹

It has been repeatedly emphasized that currently available information on neuropsychiatric aspects of HIV infection is of uncertain generalisability. Most studies have been carried in Western countries.

This article strives to comprehensively study the neuropsychiatric morbidity as well as the suicidal risk in the same HIV patients.

METHOD

A patient sample of HIV positive as well as HIV

negative individuals were taken from a tertiary hospital setting. A total number of 129 HIV positive adult patients were taken from those attending the ART center, Government Medical College, Amritsar. The cases were selected randomly and on the basis of consent obtained, during a course of one year between 2008 and 2009. The controls were HIV negative patients taken from hospital population and attending OPD of other departments. Precise aim of the study and the nature of the study were explained to the patients and they were assured of confidentiality of the information given. Informed consent was obtained. Exclusion criteria included those below 18 years of age and those not giving consent. The cases as well as the controls were subjected to a detailed psychiatric assessment. The diagnosis if any was made on the basis of detailed psychiatric history, mental state examination and ICD-10 criteria further supported by application of schedule for clinical assessment in neuropsychiatry (SCAN) of WHO. Suicidal risk ideation was assessed using the Beck scale for suicidal ideation¹², a 21 item self report instrument for detection and measure of severity of suicidal ideation.

RESULTS

Out of the total 179 sample patients, 129 were HIV positive, 50 were HIV negative, with the mean age being 38.9 years. The mean age of HIV positive patients was 35.8 years. There were 107 males with 85 HIV positive and 22 HIV negative and 72 females, 44 HIV positive and 28 HIV negative.

Out of 129 HIV positive cases, 66 (51.1%) had one or more psychiatric diagnosis, out of these 66 cases with psychiatric diagnosis, 45 (68%) were males while 21 (32%) were females. Out of the 50 controls, psychiatric diagnosis was found in 15 (30%) patients. Most of the cases with a psychiatric diagnosis were in Stage I of HIV/AIDS WHO clinical staging (76%).

In 129 HIV positive patients, 35 (27%) were found to be suffering from an affective disorder, 21 (16%) were suffering from one or more substance use disorders, 8 (6%) from adjustment disorders. One patient was found to be in delirium, one patient had ATPD and one patient was suffering from gender identity disorder.

In the suicide risk assessment, 28 HIV positive (21%) patients had presence of suicidal ideation with 9 of them having significant BSS score of more than 10. Out of 28 HIV positive patients with presence of suicidal ideation, 17 were males and 11 were females. The male suicidal ideators were found more likely to be active ideators with higher score on Beck Scale for suicidal ideation. The presence of suicidal ideation was also associated with class IV (upper lower class) of the Kuppaswamy Socioeconomic Scale 2007 in 75% of suicidal ideators. The presence of depressive disorder was associated with suicidal risk in 22 individuals out of 35 with a diagnosis of depressive disorder. Scores of more than 10 on BSS was found in 12 patients, out of which 10 had a diagnosis of severe depressive episode.

DISCUSSION

We tested the hypothesis that HIV positive individuals will have higher rates of psychiatric morbidity than demographically similar HIV negative individuals. We examined whether time since diagnosis of HIV positive status and HIV clinical staging affected the presence or severity of mental illness. The current study also examined the presence of increased suicidal risk in HIV positive patients and the relation between psychiatric illness and suicidal risk.

We have found an increased rate of psychiatric diagnosis (RR = 6.6) in HIV positive patients as compared to HIV seronegative control. The most common ICD-10 diagnosis in such patient is depressive disorder present in 35 (27%) which is not different from similar studies attempted earlier. The rates of depressive disorder

TABLE 1
Psychiatric Diagnosis in HIV Positive Individuals

Psychiatric diagnosis	HIV Positive (n=129)	HIV Negative (n=50)
Depressive disorder	35 (27.0)	4 (8.0)
Substance use disorder	21 (16.2)	7(14.0)
Adjustment disorder	7 (5.0)	1 (2.0)
Anxiety disorder	3 (2.5)	1 (2.0)
Bipolar affective disorder	1 (<1)	-
Delirium	1 (<1)	-
Acute psychosis	1 (<1)	-
Gender Identity Disorder	1 (<1)	-
TOTAL	71 (55)	14 (28)

have differed dramatically from 0% to 47.8% in various studies. A study in 1988 first studied rates of depression and concluded the rate to be 11.11% of HIV positive men and compared to 3% in seronegative men¹³. Another study on 166 HIV positive men found the rate to be 10.24%¹⁴. A study found the rates of depressive order in HIV positive men to be 23%¹⁵.

The second most common diagnosis in HIV/AIDS patients in presence of substance use disorders (Table 1). Substance use disorder was present in 26 (20%) of HIV positive patients. Opioid dependence was present in 17 (13%) patients, 10 patients were current IV opioid dependent. IV opioid dependence had life time prevalence = 17/129 (13%) in the studied population. Opioid use is highly prevalent in the region, both as oral and intravenous form.

Suicidal risk assessment showed an increased risk of suicidal behavior in HIV positive individuals (Table 2). 28 HIV positive (21%) individuals reported suicidal ideation with 9 individuals having active suicidal ideation signifying elevated risk of suicidal attempt in the future. The presence of suicidal ideation was also associated with class IV (upper lower class) of the Kuppaswamy Socioeconomic Scale 2007 in 75% of suicidal ideators. The time since diagnosis of HIV positive status also bears a significant correlation with suicidal risk. There was almost

TABLE 2
Suicidal Ideation in HIV Positive Individuals

HIV Status	Suicidal Ideation	
	Present	Absent
Positive	28 (21%) ASI*: 4 (14%) PSI**: 18(64%) (n=179) Both: 6 (22%)	101 (79%)
Negative (n=50)	5 (10%)	45 (90%)

*Active suicidal ideation, ** Passive suicidal ideation

similar distribution between the group of patients with time of diagnosis between 1 month and 1 year, and those with more than 1 year. Though on careful examination, 12 out of 28 patients with suicidal risk showed scores more than 10 on BSS. 8 out of these 12 patients had been diagnosed between 1 and 12 months prior to this study suggesting a probable role of time since diagnosis. This assertion requires examination of more number of patients. The male suicidal ideators were found more likely to be active ideators with higher score on Beck Scale for suicidal ideation indicating a possible relation with lethality of intent in the event of a suicide attempt. Statistical analysis revealed a more than two times risk (relative risk 2.71) of suicidal behavior in HIV positive as compared to HIV negative individuals. Although it is not returned as statistically significant ($p=0.070$) which might be accounted by lower number of cases than needed for significant correlation to emerge. In all the patients with suicidal ideation, a psychiatric diagnosis was present, with depressive disorder (60%) and substance use disorders (42%) being the most common one. The active suicidal ideation was present more with severe depressive episode indicating a higher risk. Suicidal risk showed no relation with the clinical staging of HIV/AIDS. A study had revealed increased suicidal risk in HIV positive group along with increase risk in stage IV disease (CDC) with respect to stage III disease (CDC)⁸. A rate of 14% of suicidal intent was found

in HIV positive patients in a tertiary care hospital in India¹⁵. Few studies also revealed decreased risk of suicide in AIDS patients as compared to HIV patients⁹⁻¹⁰.

From the current study there is strong evidence that HIV diagnosis is associated with increased prevalence of depressive disorders and substance use disorder. Whether the increased prevalence constitutes or promotes risk behavior for being infected with HIV or whether HIV itself is a causative factor for the disease cannot be commented upon.

The time since diagnosis and the WHO clinical staging of HIV/AIDS has no correlation with the presence or severity of the psychiatric disorder.

Suicidal risk was found to be about 3 times elevated in HIV positive individuals as compared to HIV negative individuals but to achieve a statistical significance more number of cases may be examined.

Suicidal ideation especially active suicidal ideation was found to be associated with psychiatric diagnosis most commonly depressive disorder. Active suicidal ideators were more likely to be suffering from severe depressive episode than positive ideators. The time period between 1 and 12 months after the diagnosis may be associated with a higher suicidal intent or risk.

The comparison above between various studies on HIV patients, first of all reflect a severe dearth of comprehensive studies on the subject in India. The rates of depressive disorder in HIV patients are on the higher side as compared to the western studies. Many factors can be responsible for this disparity. This disparity may also point out to psychosocial factors like greater stigma attached to the disease in India, lack of reliable support services to such patients, delayed recognition of depressive symptoms in our setting.

Limitations on the study were the patient sample was taken from those attending the ART

centre which may have been an indicator of motivated patients. The personality disorders and other psychosocial factors were not studied in the study which could have shed more light on the etiological aspect of psychiatric diagnosis or the risk behaviors associated with HIV/AIDS population. The number of HIV positive patients was limited for a statistical significance to emerge clearly.

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