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Psychiatry and HIV: A retrospective study for four years

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Abstract

There is a complex relationship between HIV infection and psychiatric disorders. Being HIV infected could result in psychiatric disorders as a result of psychological consequence or because of the effect of the virus on the brain. Patients with severe mental illness are thought to be at increased risk of acquiring HIV infection. This could be attributed to several characteristics of certain subgroups of psychiatric patients, including having a substance-related disorder (particularly intravenous drug use), being single or divorced, practicing risky sexual behavior, and having reduced awareness about the modes of transmission of infectious diseases and of relevant protective measures. Aim of the study is to see the prevalence of HIV infection among psychiatric patients and to evaluate the risk factors of acquiring infection. This study retrospectively assessed the seroprevalence of HIV infection among psychiatric patients who were referred for laboratory testing over a period extending from September 2011 to August 2015. A total of 2477 patients were referred for laboratory testing, out of which 06 (0.24%) were found to be seropositive. Out of the 06 cases 04 (66.67%) were found to be having substance-related disorder. 04 patients were diagnosed to be having Schizophrenia and one patient with Unspecified nonorganic psychosis. Risk reduction methods used elsewhere may not be effective among these patients. Severe psychiatric and cognitive impairments affect their ability to adopt new behaviors; extreme social deprivations constrain their options for sex and influence patterns of drug use; and sensitive outreach is required to ensure their participation in any formal program. Though the prevalence of HIV is low among psychiatric patients, still new intervention strategies in this section of the population is needed.

Keywords: HIV, prevalence, psychiatry

Introduction

Acquired Immunodeficiency Syndrome or AIDS was 1st reported from North America in 1981 from a group of homosexual men dying of unusual opportunistic infections and malignancies (CDC 1981) [1]. Subsequently, a retrovirus now termed Human Immunodeficiency virus was identified as the causative agent by a team of French scientists led by Dr. Luc Montagnier of Pasteur Institute and American scientists led by Dr. Robert C. Gallo of National Cancer Institute in 1983-84 (Barre-Sinoussi *et al.* 1983; Gallo *et al.* 1984; Popovic *et al.* 1984) [2, 3, 4]. According to World Health Organization (WHO) statistics there were approximately 36.7 million people living with HIV/AIDs worldwide by the end of 2015. An estimated 0.8% (0.7-0.9%) adults within age group 15-49 yrs are living with HIV worldwide (WHO Global Health Observatory Data). HIV is the world's leading infectious killer. An estimated 39 million people have died since the first case was reported in 1981 and 1.1 million people died of AIDS related causes in 2015 (WHO Global Health Observatory Data).

In India HIV infection was first detected in commercial sex workers (CSW) in Chennai in 1986. India remains a low prevalence country with average adult (15-46 yrs) prevalence of 0.26% (India HIV estimations 2015, Technical report).

Among the states/UTs, in 2015, Manipur has shown the highest estimated adult HIV prevalence of 1.15%, followed by Mizoram (0.80%), Nagaland (0.78%), Andhra Pradesh & Telangana (0.66%), Karnataka (0.45%), Gujarat (0.42%) and Goa (0.40%). Besides these States, Maharashtra, Chandigarh, Tripura and Tamil Nadu have shown estimated adult HIV prevalence greater than the national prevalence (0.26%), while Odisha, Bihar, Sikkim, Delhi, Rajasthan and West Bengal have shown an estimated adult HIV prevalence in the range of

0.21– 0.25%. All other States/UTs have levels of adult HIV prevalence below 0.20% (India HIV estimations 2015, Technical report). The North Eastern region comprises of seven states: Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. 1st case of HIV in injectable drug user was reported from Manipur in 1989 (medind.nic.in)

There is a complex relationship between HIV infection and Psychiatric disorders (Chandra PS, Desai G, Ranjan S. 2005) [6].

- Psychological consequence of HIV infection could result in psychiatric disorders or
- Effect of HIV virus on brain may lead to psychiatric illness.
- Certain subgroups of Psychiatric patients shows high risk behavior like IV drug use, practicing risky sexual behavior leading to HIV infection.

No published data can be found from this region showing the seroprevalence of HIV infection in psychiatric patients. Keeping all these points in mind this study was undertaken with the following aims and objectives:

- To see the prevalence of HIV infection in Psychiatric patients
- To evaluate the risk factors of acquiring infection.

Materials and Methods

Study was carried out in Lokopriya Gopinath Bordoloi Regional Institute of Mental health (LGBRIMH) located in Tezpur, Assam. LGBRIMH is one of the oldest mental health care institutes in India established in the year 1876, catering to the mental health care of the people of North-eastern region. The study was conducted retrospectively for a period of 4 years, from September 2011 to August 2015. Study design: Observational study Patients attending the out-patient department of the Institute, referred for HIV counselling and testing (from September 2011 to August 2015) were included in the study. Patients' age, gender, clinical diagnosis and state of residence were extracted keeping the identity of the patients anonymous. (as per NACO guidelines). Patients of both gender with age 15 yrs and above were included in the study. Patients' clinical diagnosis were made following ICD -10 guidelines with the help of a consultant psychiatrist. HIV testing was performed using kits as recommended in NACO guidelines.

Kits used:

1. SD BIOLINE
2. Pareekshak HIV -1/2 Triline Card Test
3. Pareekshak HIV 1/2 Spot Rapid Test

Results and Discussion

During the study period (extending from September 2011 to August 2015) total OPD attendance was 3,57,257 out of which 2,477 patients were referred for HIV counseling and testing.

Out of 2,477 cases referred for HIV counseling and testing, 06 came out to be positive. The prevalence of HIV infection in psychiatric patients were found to be 0.24% which is less than the National average (general population) of 0.26%. It is also less than the prevalence in Manipur (1.15%), Mizoram (0.80%), Nagaland (0.78%) and Tripura (0.26%). But it is greater than the prevalence in Assam, Arunachal Pradesh and Meghalaya which is (<0.20%) (India HIV estimations 2015, Technical report).

Studies conducted in Europe and USA have documented HIV infection among patients with mental illness ranging from 4 to 23% (Stefan MD *et al.* 1995; Carey MP *et al.* 1995) [7, 8]. In a prospective study conducted on Psychiatric patients in India (between 1993 and 1997 at NIMHANS), the seroprevalence rate was found to be 2.11% in a sample of 2283 patients tested for HIV (Chandra PS *et al.* 1999) [9]. In another study assessing HIV seroprevalence in mentally ill patients in a general hospital setting in South India prevalence was found to be 1.03% [12] (Tharyan P *et al.* 2003) [10]. No studies on this group of patients were found from North Eastern region.

In this study it was also seen that equal number of males and females were found to be HIV positive. Whereas from the total cases referred for counselling and testing 73.20% were males and 26.79% were females. But in some studies from India higher HIV positivity were found in males in comparison to females [12, 11] (Tharyan P *et al.* 2003; Chandra PS *et al.* 1999) [10, 9].

It was also observed that most of the patients (38.19%) belonging to the age group 25-34 yrs were sent for HIV testing and counselling, followed by 35-49 yrs age group (31.78%).

Out of the 06 HIV positive patients, three (50%) belonged to the age group 35-49 yrs and two patients (33.33%) belonged to 25-34 yrs. Similar findings were seen in other studies also with most of the seropositive patients belonging to 30-39 yrs age group [12] (Tharyan P *et al.* 2003)

In this study, the study design did not permit to assess whether the seropositive cases had a primary psychiatric illness or psychiatric illness secondary to HIV infection. But among the positive cases majority i.e. 04/06 (66.67%) were diagnosed to be Schizophrenic. In a prospective study conducted on psychiatric inpatients in India 14% of seropositive cases had schizophrenia while 44% showed alcohol dependence syndrome [11] Chandra PS *et al.* 1999) [9]. According to WHO report on HIV/AIDS and mental health (2008), some studies have reported behavioral risk factors for transmission of HIV in between 30% and 60% of people with severe mental illnesses. These risks include injecting drug use, sexual abuse, multiple partners. In this study also 04 out of 06 (66.67%) HIV positive patients were found to be IV drug user. IV drug abuse using shared needles is the second most common route of HIV infection, first being risky sexual behaviour [13] (Mirante E 1993) [11].

One fourth (25%) of India's HIV positive cases come from the northeast states of Manipur, Mizoram, and Nagaland, which contribute only 3 per cent of the country's total population [13] (Mirante E 1993) [11]. The ease of availability of opioids from across the border along with prevailing psychosocial factors have definite contribution towards high prevalence of IV opioid dependence in these states [14] (Desai NG 1997) [12].

Regarding state of residence of positive patients, it was seen that 03 patients (50%) belonged to Nagaland, 02 (33.33%) were from Assam and 01 (16.67%) belonged to Arunachal Pradesh.

When the data was compared with total OPD attendance, It was also seen that 0.28% (03/1073) patients hailing from Nagaland were found to be positive. In case of Assam it was 0.00056% (02/3,53,750). And 0.055% (01/1820) in Arunachal Pradesh. Also the Prevalence in general population in Nagaland (0.88%) was more than other North-Eastern states.

Table 1: Details of the HIV positive patients

VARIABLE	NUMBER	% OF TOTAL
SEX		
MALE	03	50 %
FEMALE	03	50 %
AGE		
15-24 yrs	00	-
25-34 yrs	02	33.33 %
35-49yrs	03	50 %
≥50 yrs	01	16.67 %
RISK FACTORS		
DRUG ABUSE	04	66.67 %
DIAGNOSIS		
SCHIZOPHRENIA	04	66.67 %
UNSPECIFIED	01	16.67 %
DELUSIONAL DISORDER	01	16.67 %

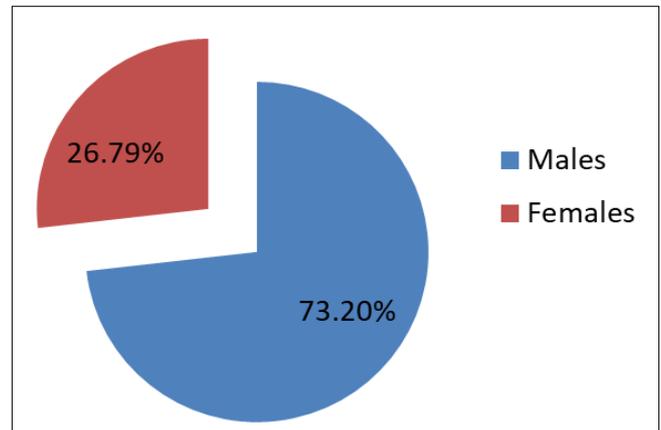


Fig 4: Distribution of total patients (for HIV counselling and testing) according to sex

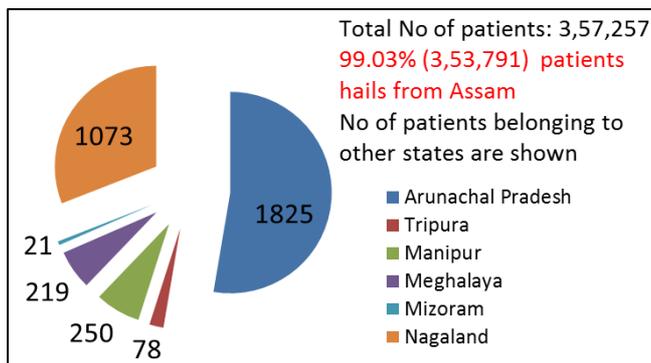


Fig 1: Distribution of patients according to State of residence attending OPD of LGBRIMH during study period (September 2011- August 2015)

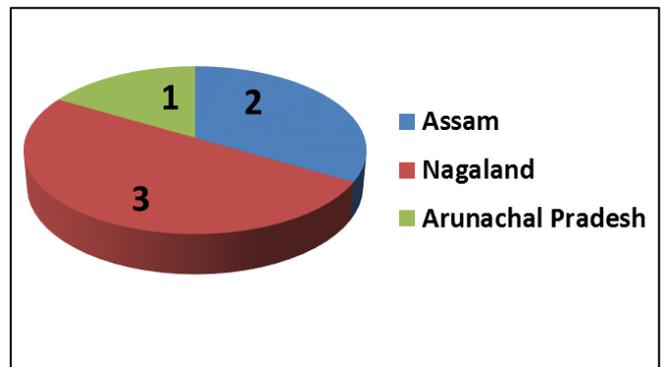


Fig 5: State of residence of positive patients

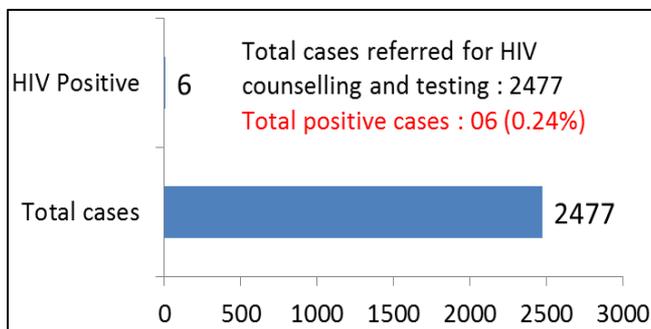


Fig 2: Prevalence of total positive cases and total number of cases referred

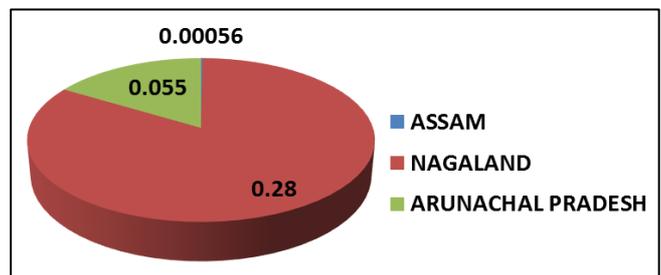


Fig 6: % of positive patients from total patients attending OPD

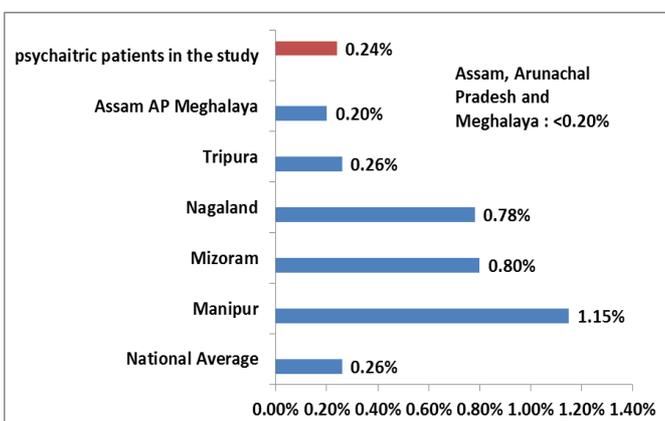


Fig 3: Comparison of prevalence of HIV in Psychiatry Patients in the study with the NATIONAL Average and other NE states

Conclusion

Prevalence of HIV in psychiatric patients in this study, is found to be 0.24%. 50% of patients among positive cases gives history of drug abuse. As the study group is restricted in terms of number of patients and all the risk factors could not be assessed in this study. Prospective studies are required to explore the real scenario.

Psychiatric patients can be considered a high risk group, as the patients generally exhibit high risk behavior. And severe psychiatric and cognitive impairments affect their ability to adopt new behaviors; extreme social deprivations constrain their options for sex and influence patterns of drug use. Sensitive outreach is required to ensure their participation in any formal program and new intervention strategies in this section of the population is needed.

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