PSYCHIATRIC MORBIDITY IN HIV/AIDS: A 5-YEAR RETROSPECTIVE STUDY IN JOS, NIGERIA.

***Audu MD, **Larry NA, *Piwuna CG, *Agbir M.**

Department of Psychiatry, *Jos University Teaching Hospital, Jos; **Northgate Hospital, Great Yarmouth, Norfolk UK.

Correspondence: **Dr. Moses D. Audu**
Department of Psychiatry, Jos University Teaching Hospital, Jos

ABSTRACT

Background

Most studies of psychiatric disorders associated with HIV/AIDS have been carried out in the USA and Europe in patients on anti-retroviral drugs. Few studies have looked at psychiatric disorders and substance use in Africa and a dearth of literature exists on HIV/AIDS and psychiatric morbidity in Nigeria.

Objectives

The objectives of the study were:

1. To determine the rate of referral for psychiatric consultation among patients with HIV/AIDS
2. To determine the psychiatric diagnoses at referral
3. To determine the rate of substance use among referred patients.

Method

A retrospective chart review conducted among HIV/AIDS patients referred to an urban Teaching Hospital in Jos, Nigeria from January 2000 to December 2004. The case notes of patients who presented at the General Outpatient Department (GOPD) and Accident and Emergency Units or those who were treated at the medical, surgical, and psychiatric departments were retrieved from the records department and scrutinized.

A semi-structured questionnaire was used to record the sociodemographic data, the diagnoses, substance(s) used, and the anti-retroviral treatment taken. The cases referred for psychiatric assessment were compared with available records of clients who attended the hospital for HIV/AIDS-related illnesses. Cases treated at the specialist clinic for HIV/AIDS were excluded.

Results

Available record showed that a total of 420 confirmed cases of HIV/AIDS were treated within the study period. 247 were in WHO stages 111&1V while 177 were in WHO stages 1&11. 120 patients were referred for psychiatric consultation giving a referral rate of 25%. The rate of referral was significantly associated with less advanced stage of the disease process ($p<0.01$). The commonest diagnosis was delirium, 40 (33.3%), followed by depression 35, (29.2%), and psychosis 17 (14.2%). 25% of the referred cases abused substances, mainly alcohol either singly or in combination.

Conclusion

The study revealed that psychiatric disorders are a common manifestation of HIV/AIDS in this environment. This highlights the need for routine psychosocial assessment of patients with HIV and underscores the need for a multidisciplinary approach to the treatment of HIV/AIDS to ensure better quality of life and compliance with anti-retroviral treatment.

INTRODUCTION

HIV-infected patients have high rates of psychiatric morbidity[1-3]. Epidemiological studies have reported higher rates of several psychological/psychiatric disorders when compared to the general population base rates[4-6], but reported prevalence rates differ considerably depending on the stage of infection and study population.

HIV infection and psychiatric disorders have a complex relationship[7]. AIDS can present with

organic or functional psychiatric sequelae[8]. Psychiatric morbidity in HIV can result from pre-existing psychiatric conditions or the devastating psychosocial impact of having a life-threatening illness[9]. Psychiatric complications can also occur secondary to metabolic derangements, effects of space-occupying lesions, central nervous system (CNS) infections, side effects of medications, or the direct cytopathic effects of the virus on the CNS[10,11].

The most common diagnoses associated with HIV infection are major depression, anxiety, and adjustment disorder[3,12-15]. Adjustment reactions, including expressions of despair, guilt, anxiety, protest, and depression in those recently diagnosed with HIV infection occur in up to 90%[16]. HIV-induced psychosis is an uncommon complication with a prevalence rate of 0.1% to 5%[17], but its emergence in individuals with AIDS-related dementia may be a prognostic sign indicating an increased risk of death[18].

The abuse of drugs is known to increase the risk of HIV infection by direct intravenous transmission[12, 19, 20-21], but the use of other substances, such as alcohol, cocaine, and nitrites impairs judgment. This leads to impulsive and risky behaviours such as unsafe sex, and increases the risk of acquisition or transmission of HIV infection[22,23]. However, most patients with substance abuse disorders develop these disorders before acquiring HIV[24].

One of the most important predictors of psychiatric disturbance in HIV infection is a psychiatric history[25]. Psychological distress in HIV/AIDS patients is associated with decreased adherence to medication regimen and accelerated disease progression[26,27]. Several studies have been carried out in the USA and Europe about the psychiatric complications of HIV/AIDS but there is a dearth of such literature in Nigeria. Consequently, this study was conducted to determine the psychiatric morbidity associated with HIV/AIDS as seen in the Jos University Teaching Hospital (JUTH) over a 5-year period from January 2000 to December 2005.

Objectives

The objectives of the study were:

1. To determine the rate of referral for psychiatric consultation among patients with HIV/AIDS
2. To determine the psychiatric diagnoses at the time of referral.
3. To determine the rate of substance use among patients.

METHODS

This is a retrospective chart review of confirmed cases of HIV/AIDS at the Jos University Teaching Hospital from January 2000 to December 2004, excluding cases treated at the specialist clinic for HIV/AIDS-AIDS Preventive Initiative In Nigeria (APIN). The Records Department provided the list of clients and their identification numbers. This was used to manually retrieve all available files, which where then scrutinised by the authors. A form designed by the authors was used to extract the sociodemographic data, clinical data, and substances used. The psychiatric diagnoses of patients referred for psychiatric consultation from the General Outpatient Department, Accident and Emergency, and Medical and surgical wards were made according to ICD-10[29]. The staging of disease process was done according to the WHO staging system: Clinical Classification[28]. The referred clients were compared with the non-referrals on sociodemographic, clinical and substance use variables. All patients who had a previous history of psychiatric disorder were excluded. 439 case files were obtained, many others were traced to the specialist clinic (but were not available for this research), 424 cases met the research criteria, while 15 files were duplicated as patients opened separate files in different departments.

Data analysis

The data was analysed using SPSS version 11.0 for Windows. Simple descriptive statistics were used.

RESULT

A total of 424 patients met the diagnostic

criteria for HIV/AIDS within the study period. 211 (49.8%) were males, while females were 213 (50.2%). The age group 30-39 years constituted the highest number of patients, 165 (38.9%). 349 (92.7%) of the patients fell into the age group 20-49 years.
The mean age for the population was 33.9± 9.1 years.

One hundred and twenty patients were referred for psychiatric consultation out of the 424 patients managed at the GOPD, medical and surgical departments, and Accident and Emergency Department making a referral rate of 27.6%.

Patients who presented with advanced stages of the disease process (WHO stages 111 & 1V) formed the majority, 247 (58.3%), while those who presented at less advanced stages of the disease process (WHO stages 1 & 11) were 177 (41.7%). 21 (5.0%) of the total population were on antiretroviral treatment (ART), 24 (5.6%) had dropped out of ART, while the overwhelming majority, 379 (89.4%) had not had ART.

For the referred cases, 5 (4.2%) patients were on ART, 10 (8.3%) had dropped out of ART for various reasons, while 105 (87.5%) were not on ART.

Referral for psychiatric consultation was significantly associated with less advanced stages of the disease process ($X^2=10.619$, df=1, $p<0.01$), but was not significantly associated with the use of antiretroviral drugs ($X^2=2.388$, df=2, $p>0.10$), sex ($X^2=1.034$, df=1, $p>0.1$), and age-group ($X^2=6.11$, df=3, $p>0.10$).

Table I

AGE DISTRIBUTION OF REFERRED AND NON-REFERRED CASES FOR PSYCHIATRIC CONSULTATION

Age-group (years)	Referred	Non-Referred	Total	%
10-19	4	3	7	1.7
20-29	50	90	140	33.0
30-39	39	126	165	38.9
40-49	22	66	88	20.8
50-59	5	14	19	4.5.
60-69	0	5	5	1.2
Total	***120***	***304***	***424***	***100.0***

The age group 30-39 had the highest number of patients, 165 (38.9%), but more patients were referred for psychiatric care in the age group 20-29. Excluding the age groups 10 - 19 and 60 -69, the difference in the rate of referral among the age groups was not statistically significant ($X^2=6.11$, df=3, $p>0.10$).

Table II

PSYCHIATRIC DIAGNOSES IN PATIENTS REFERRED

Diagnosis	WHO 1&11	WHO 111&1V	N	%
Delirium	17	23	40	33.3
Depression	20	15	35	29.2
Psychosis	12	5	17	14.2
Mania	7	3	10	8.3
Dementia	2	6	8	6.7
Anxiety disorders	4	2	6	5.0
Suicide/attempted suicide	2	0	2	1.7
Others	2	0	2	1.7
Total	**74**	**54**	**120**	**100.0**

Mood disorders formed the highest frequency of psychiatric disorders (37.5%) followed by delirium, 40 (33.3%). Majorit y of the patients were in WHO stages 1 -11 of HIV infection, 74 (61.7%). 27 (60%) of mood disorders were found in less advanced stages; whereas cases of delirium were greater in stages 111&1V, 23 (57.5%).

Table 111

SUBSTANCE ABUSE AMONG PSYCHIATRIC REF ERRALS

Substance	N	%
Alcohol	14	11.7
Cannabis and cigarette	4	3.3
Alcohol, Cannabis, and others	12	10.0
None	90	75.0
Total	**120**	**100.0**

Patients who abused substances formed 25% of the sample. Majority of the patients abused alcohol, either singly or in combination with cannabis, 26, (21.7%).

DISCUSSION

The study showed that about a quarter of the patients who presented with HIV/AIDS within the study period were referred for psychiatric consultation. Since results from published work mainly in the developed countries showed that the rate of psychiatric[1,2] morbidity is higher in HIV/AIDS patients[1,2], it is expected that in ART-naïve patients in a developing country like ours, the rate of psychiatric morbidity would be higher than what we found due to interactions of factors like stigma, poor social support, financial constraint, poor nutrition, and difficulty procuring anti-retroviral drugs within the period of study. The rate of referral was significantly associated with less advanced stages of the disease process. The higher rate of referral among HIV-infected patients compared to those with full-blown AIDS is attributable to multiple factors mentioned above coupled with the cytopathic effects of the HIV virus soon after initial infection[30]. It is also possible that some of the AIDS cases would have died before they could be referred for psychiatric consultation.

Most of the referred cases were those who had major psychiatric disorders. Since the study is a retrospective one and psychiatrists were not routinely involved in the management of HIV/AIDS patients due to scarcity of psychiatrists, it is assumed that several cases with minor psychiatric disorders and mild cognitive deficits would have been missed because of non-recognition.

The commonest psychiatric disorder was mood disorder (37.5%). Most of the cases presented with major depression and a few with mania. Studies have reported that depression is the commonest psychiatric disorder in asymptomatic, HIV positive or AIDS patients on ART [6, 13]. This finding is in keeping with most published work on this subject. Since majority of the patients were not on antiretroviral drugs, it then means that irrespective of the stage of the disease and whether the clients are on anti-retroviral therapy or not, patients tend to present with mood disorder. This supports the study by Judd et al[32] that there was no association between depression and HIV disease status. The devastating psychosocial impact of having a life-threatening illness and knowing others who have died of HIV-related illness would most probably contribute to the development of mood disorder[9]. Additionally, some reports suggest that those with the most medical complications of HIV may be the most anxious or depressed[33]. It has also been proposed that anxiety and depression are more evident at transitional points of the disease[30];

such transitions are often identified by physical symptoms.

Primary manias have been reported in the literature[34]. Secondary manias occurring because of the medical complications of HIV or pharmacological treatment can emerge anytime during HIV infection[35]. It is also hypothesized that mania is directly caused by HIV brain infections[36] and tends to be associated with higher incidence of HIV-associated dementia[37]. Hence mania might signify transition or advancement of disease progression from an asymtomatic to symptomatic stage[38]. In this study, 10 cases of mania were reported and 7 of them were in the less advanced stages of the disease. This might probably herald the transition to more advanced stages of the disease.

Estimates of rates of delirium in HIV patients range from 43% to greater than 65% in late stage disease[39,40]. Among the various psychiatric disorders, delirium featured prominently. The metabolic derangement, CNS infections, side effects of medicines, direct cytopathic effect of the virus on the CNS, and the effects of space occupying lesions which accompany HIV infection would explain the high rate of delirium in the patients[10,41]. Though referral for psychiatric consultation was significantly associated with less advanced stages of the disease and an insignificant number had anti-retroviral therapy in this study, with the advent of highly active antiretroviral therapy at affordable cost and aggressive campaign couple with support from government to create awareness about HIV/AIDS and to effectively cope with it, it is expected that cases of delirium will drop significantly.

The pre- and post-test counselling[42,43] and efforts being made by government, Non Governmental Organizations (NGOs), and religious bodies to help patients live successfully with the illness could explain the dearth of anxiety disorders, but it is also possible that such cases were not referred. Also, the few cases of anxiety disorders could be explained by the fact that the study was carried out in a tertiary institution. Therefore, it is assumed that cases of anxiety disorders would have been taken care of at the secondary level of health care.

About 25% of the patients, who were referred to the psychiatrists used substances. Substance abuse is a risk factor for contracting HIV/AIDS. Moreover, HIV-infected patients who abuse substances as well may not comply with their medical treatment. Additionally, they may not take precaution against infecting others through sharing of infected needles used to inject drugs, and they are likely to have sex with multiple partners without the use of condoms during periods of intoxication.

CONCLUSION

The study revealed that psychiatric disorders are a common manifestation of HIV/AIDS in this environment. This highlights the need for routine psychosocial assessment of patients with HIV and underscores the need for a multidisciplinary approach to the treatment of HIV/AIDS to ensure better quality of life and compliance with anti-retroviral treatment.

REFERENCES

1. Khouzam HR, Donnelly NJ, Ibrahim NF. Psychiatric Morbidity in HIV Patients. Can J Psychiatry 1998; 43:51-56.
2. Sacks M, Burton W, Dermatis H, Looser-Ott S, Perry S. HIV-related cases among 2,094 admissions to a psychiatric hospital. Psychiatric Serv. 1995; 46: 131-5
3. Pence BW, Miller WC, Whetten K, Eron JJ, Gaynes BN. Prevalence of DSM-IV-defined Mood, Anxiety, and Substance Use Disorders in an HIV Clinic in the South Eastern United States. J. Acquir Immune Defic Syndr. 2006;
4. Maj J. Organic Mental Disorders in HIV-1 infection. AIDS 1990; 4: 831-840.
5. Perry S, Jacobsberg LB, Fishman B, et al. Psychiatric diagnosis before serological testing for the human immunodeficiency virus. Am J Psychiatry 1990; 147: 89-93.
6. Atkinson JH, Grant J, Kennedy CJ et al. Prevalence of psychiatric disorders among men infected with the human immunodeficiency virus: A controlled study. Arch Gen Psychiatry 1988; 45: 859-864.
7. Chandra PS, Desal G, Ranjan S. HIV and Psychiatric disorders. Indian Journal of Medical Research 2005; 121(4): 451-67.

8. Catalan J. HIV and AIDS-related psychiatric disorder: what can the psychiatrist do? Dilemmas and Difficulties in the management of Psychiatric patients (K. Hawton, P. Cowen eds.). Oxford, Oxford University Press, 1990, p.205-217.
9. Perry SW, Jacobsberg R, Fishman B. Psychiatric diagnosis before serological testing for the human immunodeficiency virus. Am J. Psychiatry 1990; 233: 495-7.
10. Sartorius N. AIDS and mental health. Irish Journal of Psychological Medicine 1992; 9:3-5.
11. Willey AC. Pathology of Neurologic Diseases in AIDS. Psych. Clin. Nor America, 1994; 17: 1-5.
12. Stefan MD, Catalan J. Psychiatric patients and HIV: a new population at risk? British Journal of Psychiatry 1995; 167: 721-7.
13. Fiona Judd, Angela Komiti, Phyllis Chua, Anne Mijch, Jinnifer Hoy, Paul Grech, Alan Street, John Lyod, Ben Williams. Nature of depression in patients with HIV/AIDS. Australian and New Zealand Journal of Psychiatry, 2005, 39: 826-32.
14. Miller D, Riccio M. Nonorganic psychiatric and psychosocial syndromes associated with HIV-1 infection and disease. AIDS, 1990; 381-388.
15. Naber D, Perro C, Schick U, et al. Psychiatric symptoms and neuropsychological deficits in HIV infection. In Neuropsychopharmacology (W.E. Bunney, H. Hippius, G. Laakman, et al. eds). Berlin, Springer-Verlag. 1990, pp. 745-755.
16. World Health Organisation. Global programme on AIDS. Report of the consultation on the neuropsychiatric aspects of HIV infection. Geneva, WHO, 1998.
17. Sewell DD, Jeste DV, Atkinson JH, Heathon RK, Hesselink JR, Wiley C, et al. HIV- associated psychosis: a study of 20 cases. San Diego HIV neurobehavioral research center group. American Journal of Psychiatry 1994; 151:237-42.
18. Mayeux R, stem Y, Tang MX, Todak G, Marder K, et al. Mortality risks in gay men with human immunodeficiency virus infection and cognitive impairment. Neurology 1993;43:176-82.
19. Cournos F, Horwath E, Guido JR et al. HIV-1 infection at two public hospitals in New York City. AIDS Care 1994; 6:443-452.
20. Cournos F, Guido JR, Coomaraswamy S, et al. Sexual activity and risk of HIV infection among patients with Schizophrenia. American Journal of Psychiatry 1994; 151:228-232.
21. Stewart DL, Zuckerman CJ, & Ingle JM. HIV seroprevalence in a chronically ill population. Journal of the National Medical Association 1994; 86:519-523.
22. Plant MA. Alcohol, Sex, and AIDS. Alcohol 1990; 4:759-65.
23. Ostrow DG, Van Raden MJ, Fox R, Kingsley LA, Dudley J, Kaslow RA. Recreational drug use and sexual behaviour change in a cohort of homosexual men. The multicentre AIDS cohort study (MACS). Aids 1990; 4:759-65.
24. Lipsitz JD, Williams JB, Rabkin JG, Remien RH, Bradbury M, el Sadr W et al. Psychopathology in male and female intravenous drug users with and without HIV infection 1994; 151: 1662-8.
25. Fell M, Newman S, Herns M, Durrance P, Manji H, Connolly S, McAllister R, Weller I, Harrison M. Mood and Psychiatric Disturbance in HIV and AIDS: Changes Over Time. British Journal of Psychiatry 1993; 162, 604-610.
26. Cook JA, Cohen MH, Burke J, Grey D, Anastos K, Kirstein L, Palacio H, Richardson J, Wilson T, Young M. Effects of depressive symptoms and mental health quality of life on use of highly active antiretroval therapy among HIV-seropositive women. Journal of AIDS 2002; 30: 401-409.
27. Lesserman J, Jackson ED, Petito JM, Golden RN, Silva SG, Perkins DO, Cai J, Folds JD, Evans DL. Progression to AIDS; the effect of stress, Depressive symptoms, and Social support. Psychosomatic Medicine 1999; 61: 397-406.
28. World Health Organization and Joint United Nations P on HIV/AIDS. Guidance Modules on Antiretroviral

Treatments Module 4. Safe and Effective Use of Antiretrovirals. WHO and Joint UNAIDS, Geneva 1998; pp. 5.
29. World Health Organization. The Classification of Mental and Behavioural Disorders. Clinical Descriptions and Diagnostic Guidelines 1992. Geneva. WHO.
30. Michels R, Marzuk PM. Progress in psychiatry: part II. N Engl J Med 1993; 329: 628-38
31. Hinkin CH, van Gorp WG, Satz P, Weissman JD, Thommes J, Buckingham S. Depressed mood and its relationship to neuropsychological test performance in HIV-1 Seropositive individuals. Journal of Clinical and Experimental Neuropsychology 1992; 14:289-97
32. Judd F, Komiti A, Chua P, Mijch A, Hoy J, Grech P, Street A, Lloyd J, Williams, B. Nature of Depression in HIV/AIDS. Aust NZJ Psychiatry, 2005; 39 (9): 826-32.
33. Gorman JM, Kertzner R, Cooper T, et al. Glucocorticoid level and neuropsychiatric symptoms in homosexual men with HIV infection. American Journal of Psychiatry 1991; 148: 41-43.
34. Halman MH, Worth JL, Sanders KM, Renshaw PF, Murray GB. Anticonvulsant use in the treatment of manic syndromes in patients with HIV-1 infection. Journal of Neuropsychiatry and Clinical Neuroscience 1993; 5:430-4.
35. Godwin FK, Jamison KR. Manic-Depressive illness. New York, Oxford University Press, 1990.
36. Lyketsos CG, Schwartz ZJ, Fishman M, Treisman G: AIDS Mania. J. Neuropsychiatry and Clinical Neuroscience 1997; 9: 277-279.
37. Mijch AM, Judd FK, Lykestos CG, Ellen S, Cockram A: Secondary Mania in patients with HIV infection: are Antiretrovirals Protective? J. Neuropsychiatry Clin Neurosci 1999; 14: 475-480.
38. Hutchinson G. HIV mania as a marker for clinical deterioration in AIDS. West Indian Medical Journal 2005; 54 (2): 149-51.
39. Breitbart W. et al. A double-blind trial of haloperidol, Chlorpromazine, and lorazepam in the treatment of delirium in hospitalised AIDS patients. Am J Psychiatry 1996; 152: 231-237.
40. Cohen MA, Alfonso CA. Psychiatric Manifestations of the HIV epidemic. AIDS Reader 1994; 4:97-106.
41. Grant I, Atkinson JH. The evolution of neurobehavioral complications of HIV infection. Psychological Medicine 1990; 20: 747-754.
42. Perry S, Jacobsberg L, Fishman B, et al. Psychological responses to serological testing for HIV. AIDS 1990; 4: 145-152.