

Psychiatric patients presenting with HIV-infection in Dar es Salaam Tanzania

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Abstract

Human Immunodeficiency virus (HIV) infection poses serious threats of depopulation in several developing African countries. This study analyses 20 HIV infected patients who were admitted at Muhimbili psychiatric unit from 1st January, 1988 till 30th June 1989. Psychiatric symptoms with their respective diagnoses including various physical manifestations of HIV infections are tabulated. Relevant neuropathological changes are discussed in the light of other views. The patients' prevailing socio-economic factors are also analysed and risk groups needing greater prophylactic attention are identified.

Introduction

The prevalence of antibody-positive people to HIV and frank AIDS-patients is a fast growing world-wide problem. HIV not only causes immunosuppression but also directly affects the CNS.¹ Mental changes seen in HIV-infected individuals may be due to psychosocial factors,² medications, systemic diseases, or opportunistic infections and tumours of the central nervous system.³ Lack of laboratory facilities to diagnose HIV and its associated opportunistic diseases have led to an under estimation of the real severity of the problem.¹

The impact of HIV-infection with 30,064 reported AIDS-cases by end of June 1989, is grim.⁴ Certain surveys show seropositivity rates of 10 - 15% in healthy blood-donors and 9 - 24% in pregnant women.⁵ In Africa, transmission of the HIV is mainly through heterosexual intercourse especially in the 20 - 40 years age group among individuals with more than one partner. For both seropositivity and disease, the male to female ratio is about equal. The majority of AIDS cases have been reported from urban areas in Central, Eastern and Southern Africa.^{6,7}

Tanzania had by the end of March 1989 4,158 AIDS cases reported to the WHO epidemiological records. About 90% of the cases were adults, mostly from the four consultant hospitals which are equipped with HIV - screening tests. Considering the rapid spread of HIV-infection in East Africa, the lack of adequate prophylactic measures and limited diagnostic facilities, the actual number of AIDS - cases could well be over twice the above figure.

Muhimbili Medical Centre, the biggest of four consultant hospitals in Tanzania has a bed capacity of 1,386. Between January, 1988 and 30th June, 1989, a total of 79,567 patients were admitted to this medical centre. A total of 1,163 patients were recorded as HIV - infected of which 216 died within 18 months.⁹

Awareness of symptom spectrum will enable the clinician to reach an early diagnosis and the individual patients' involved socio-economic factors may render insight into prophylactic strategies. This paper describes and discusses the presenting clinical features of 20 patients admitted to Muhimbili psychiatric ward with HIV - infection. The prevailing socio-economic factors are also analysed and reflected upon with other views.

Table 1: Physical findings and frequency

Physical findings	Patients		Remarks
	No.	%	
apparent body weight loss	14	70	
recurrent fevers	14	70	
persistent diarrhoea	12	60	
skin rashes	4	20	
multiple abscesses	4	20	2 died
neck and axillary lymph nodes	3	15	
urinary and faecal incontinence	3	15	
pulmonary tuberculosis	2	10	1 died
malaria	2	10	
herpes zoster	1	5	
hemiplegia	1	5	
3rd nerve palsy	1	5	
anaemia	1	5	
hepatosplenomegaly	1	5	
leprosy	1	5	
excessive sweating	1	5	

Patients and Methodology

From 1st January, 1988 till 30th June 1989, the Muhimbili psychiatric unit admitted 2,225 mental patients. Particulars of each patient included: Hospital number, address, date of birth, sex, religion, occupation, marital status and date of admission. For each patient a psychiatric case history was taken and a full mental state and physical examination were carried out by junior doctors, checked by a psychiatrist. Laboratory tests for HIV - screening (ELISA), full blood picture, sedimentation rate, blood slides for malaria parasites, blood culture, blood sugar, chest x-ray, urine-analysis, sputum culture and Widal tests were done where relevant. The case-notes of the HIV seropositive patients were all identified, studied and analysed retrospectively.

Results:

20 patients of mean age 27.6 years were seropositive (ELISA). 11 were males, 9 females. The mean stay in hospital was 17.9 days. 8 men were single, 3 married. 5 women were single, 2 divorced, 1 married and 1 widowed. 4 men were petty businessmen, 4 in lowly paid jobs while 3 were unemployed. 3 women engaged in petty business, 3 earned their living by prostitution, 2 were un-employed and 1 was a primary school teacher.

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Medical statistical random table were used to select 5 of the ten secondary schools. 1,100 students were randomly selected from all streams in the schools and administered a self report questionnaire developed using WHO core data for epidemiological studies of non-medical drug use henceforth abbreviated as NMDU.⁹ 20 minutes of the school timetable was utilised for filling in the questionnaire. Data collection was done over a five month period between September 1988 to January 1989 as part of health education activities in schools carried out by the Health Education Unit of the Ministry of Health.

Data analysis was done by IBM compatible PC using the statistical package for the social sciences to acquire frequency tables, crosstabulations and appropriate statistical significance tests where necessary.

Results

Demographic characteristics

A total of 1064 students filled in the questionnaire constituting a coverage of 96.9%. 66.1% of the sample were male and had an age range between 13-26 years the mean age being 17.6 years +0- 0.64, (2SD).

70.1% of the sample were indigenous African students, 22.5% of Indian or Arabic origin the remaining being of mixed parenthood. The majority of the students resided with both parents or guardians (89%), while 11% lived in single parent families. Most of the parents/guardians were in salaried employment 91.8%, and 30.5% were reported to have achieved either secondary or post-secondary education.

Pattern of Drug Use

A 63% life time prevalence of NMDU was reported. 660 students reported on who advised their NMDU. 72.8% claimed drug use had been advised by someone other than a health worker. 27.2% took the drug on their own counsel. Friends and relatives were by far the most frequent source of advice leading to drug taking (50.4%). Table 1.

Table 1. Distribution of source of advice leading to drug taking

Source of advice	Frequency No.	% N=660	% N=1064
a. Self medication without medical advice	158	23.9	14.8
b. Self medication with non-medical advice	489	74.0	45.9
Breakdown:			
Relative	158	23.9	14.8
Friend	175	26.5	16.4
Salesman (drug store)	47	7.1	4.4
Salesman (street)	13	2.0	1.2
Other person	88	13.3	8.0

Significantly more males than females reported NMDU, 36.1% and 25% respectively ($p < 0.05$ x 2 one tailed). Females were more likely to report the use of over the counter drugs than males, while males were more likely to use more potent drugs of abuse. 135 (20.5%) used over the counter drugs such as vitamins, chloroquine, aspirin, paracetamol and 16.7% stimulant use and 5.8% 'bhang' use. The other drugs screened for had lower reports of use ranging from 0.2% to 2.8%. Table 2.

Table 2: Distribution by sex of students by type of non-medical drug ever used.

Type of drug	No. of Students		%
	Males	Females	
N= 1064			
Narcotics	123 (11.5)	104 (9.7)	231 (22.0)
Stimulants	136 (12.8)	42 (3.9)	178 (16.7)
Cannabis	50 (4.7)	10 (0.9)	62 (5.8)
Sedatives	19 (1.8)	9 (0.8)	30 (2.8)
Organic solvents	11 (1.0)	2 (0.2)	13 (1.2)
Nicotine	11 (1.0)		11 (1.0)
Others (Analgesics, Chloroquine, etc.)	35 (3.3)	100 (9.4)	135 (12.7)
Total	385 (36.1)	267 (25.0)	660 (62.)*

*11 students did not fill in sex. $p < 0.05$ (X one tailed).

28.4% of the students reported drug use in the year preceding the study. These were considered active drug users as opposed to experimenters mentioned in the previous paragraph. Unfortunately the questionnaire did not allow for categories of drugs used by this group. 18.6% admitted to use during the previous month, 2.6% weekly use and 2.4% daily use. This indicates a possible core group of addicted students, in contrast to the larger majority who experiment with drugs. Table 3.

Table 3: Distribution of frequency of non-medical drug use.

Frequency of use	No. of Students	%	
		N= 1064	N=660
Use in past year	302	28.4	43.7
Use in past month	277	26.0	40.1
- For 3 days or less	198	18.6	28.7
- Once weekly but less than daily.	28	2.6	4.0
- Daily.	23	2.4	3.5
Do not remember	81	7.6	11.7

It was surprising that the onset of non-medical drug use was as early as 12 years of age for 34.4% of the respondents. Table 4.

A life time prevalence of alcohol use of 38.9% was derived. 34.1% reported active use of alcohol. 23.7% reported use at least once a month and 5.9% reported use more than once weekly. Table 5.

Table 4: Distribution of reported age of onset of non-medical drug use.

AGE OF ONSET NMDU (years)	No. of Students N=660	%
11 - 14	271	41.0
15 - 18	89	13.4
19 - 20	126	19.0
Do not remember	174	26.4

affected by HIV and the personal, social and economic costs of the HIV epidemic are enormous.

HIV sero-prevalence rates among African women prostitutes are quite high, generally ranging from 25-90%.¹⁷ From this study, chronic psychotics, business people, unemployed young females, prostitutes and single young adults emerge as risk groups needing strong prevention and control programmes.

Although the analysed patient-cohort was small and the study, a retrospective one without correlating investigations of cerebrospinal fluid, T4 lymphocyte total count, electroencephalographic tracing, the clinical spectrum of both psychiatric and physical findings and the patients prevailing socioeconomic conditions evidently augments clinical awareness of HIV infection among psychiatric patients.

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