DEMOGRAPHIC AND CLINICAL PROFILES OF HIV POSITIVE CASES : A TWO-YEAR STUDY REPORT FROM A TERTIARY TEACHING HOSPITAL

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ABSTRACT

The report on the pattern of demographic and clinical profiles of HIV positive persons in Nepal are scarce. Present study was carried out at the Universal College of Medical Sciences Teaching Hospital at Bhairahawa (UCMS-TH). Following group of patients, who attended our different OPDs for a period of two years (January 2001 to December 2002) were subjected to HIV tests: History of exposure to Commercial Sex Workers (CSW), history of travelling and working India/abroad, living single, driver/cleaner by profession, history of injection drug use (IDU), unexplained fever, diarrhoea and significant loss of weight for over a month, all cases of Sexually Transmitted Diseases (STDs), etc. A total of 43 HIV positive cases were detected during the period. Mode of transmission was as follows: 6 (13.9%) patients were injection drug users (IDU), one case (2.3%) transmitted through blood transfusion (BT), one patient (2.3%) was homosexual while heterosexual transmission was noted in 34 (79.1%) patients. Out of 23 injection drug users (IDUs) admitted during the period, 6 cases were detected positive for HIV infection. Applying 'Expanded WHO Case Definition for AIDS Surveillance', out of total 43 cases at least 28 (65%) cases could be detected as having suffering from clinical AIDS; 12 (27.7%) of them were suffering from pulmonary or extra-pulmonary tuberculosis. A significant percentage of these patients belonged to lower socio-economic class and many of them were mobile worker and contacted their illness while working in Indian metropolis in the past.

Key Words: HIV positive, Clinical AIDS, Nepal.

INTRODUCTION

Number of people living with HIV/AIDS in the world by the end of 2002 was 42 million. Five million of them were newly infected in the year 2002. A total of 3.1 million persons died of AIDS in 2002.[1] It has been the fourth leading cause of mortality worldwide. Aptly, Acquired immune deficiency syndrome (AIDS) is considered as a modern pandemic.[2,3] First AIDS case in India was recorded in 1986. An estimated number of adults and children living with HIV/AIDS in India by the end of 2001 were 5.6 million. Cumulative AIDS cases in India by December 2002 were 42957.[1,4] First AIDS case in Nepal was recorded in July 1988. Total number of HIV positive cases by March 2003 was 2665; six hundred and twenty-six of them were diagnosed as having full-blown AIDS. The highest numbers of HIV positive cases were between age group 20 to 29 years. A total of 1410 persons, including 383 females in the 20-29 age groups, have been suffering from HIV/AIDS.[5]

Universal College of Medical Sciences (UCMS) is a newly built medical institute situated at Bhairahawa, near Lumbini in Nepal. It has 250-bedded teaching hospital functioning successfully for the last three years. Bhairahawa is one of the 9 important Indo-Nepal business transit points in Nepal. There is significant young mobile population in the border areas of Nepal and India, who frequently visits either countries and abroad. This high level of mobility made them vulnerable to exposure to pre-marital, extra-marital as well as high-risk

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sexual activities. Thus, it is not unusual that we come across various kinds of sexually transmitted diseases, HIV positive cases including AIDS, amongst the patients attending our inpatient and outpatient departments. Present paper aims to study the pattern of demographic and clinical profiles of HIV positive persons detected at our teaching hospital over a period of two years.

METHODOLOGY

The study has been carried out at the medical college teaching hospital at Bhairahawa, Nepal. Inclusion criteria were all HIV positive cases detected over a period of two years (January 2001 – December 2002). It is an ongoing collaborative clinical study, involving consultants from major in-and-outpatient departments. For a review of HIV positive cases at our institute we analysed the data received from the laboratory records, inpatient and outpatient record files, interview with the specific consultants, and interviewing the patients, whenever possible. Following group of patients were subjected to HIV testing based on clinical suspicion of HIV infection - history of exposure to commercial sex worker, history of travelling and working in India/abroad, driver/cleaner by profession, history of injection drug use (IDU), unexplained fever, chronic cough, diarrhoea and significant loss of weight, all cases of Sexually Transmitted Diseases (STDs), etc.

Routinely, we conduct pre-test &+ post-test counselling to all these patients and Informed consent was taken from them before they were subjected to ELISA test for HIV. We were also partially successful in persuading some of these HIV positive patients to get the HIV test done to their present sex partner/spouse. Similar routine procedure of pre-test & post-test counselling and informed consent were taken from the patient's spouse/sex partner, who were willing to accept HIV testing. "Expanded 'WHO' case definition for AIDS surveillance"[6] was applied to establish clinical cases of AIDS amongst the 'HIV positive' patients. Besides clinically suspected patient population, screening for HIV was being done routinely to all blood donors.

A specially designed socio-demographic and clinical data sheet was prepared for the present study to note down patients' age, sex, religion, occupation, socio-economic status, presenting complain, investigation findings, clinical diagnosis, history of exposure to commercial sex worker, visit to foreign land, etc. Data thus obtained were subjected to simple descriptive statistics like frequencies and percentages.

Table : Expanded 'WHO' Case Definition for AIDS Surveillance: [6]

A.	HIV positive person	
B.	One or more of the following conditions:	
	i)	? 10% weight loss or cachexia, with diarrhoea or fever, or both, intermittent or constant, for at least one month.
	ii)	Cryptococcal meningitis
	iii)	Pulmonary or extra-pulmonary tuberculosis
	iv)	Kaposi sarcoma
	v)	Neurological impairments (e.g., CVA)
	vi)	Oesophageal candidiasis
	vii)	Clinically diagnosed life-threatening or recurrent episodes of pneumonia
	vii)	Invasive cervical cancer

RESULTS

ELISA (Enzyme Linked Immunosorbent Assay) test for HIV was carried out to 822 clinically suspected patients during the

Table I : Results of HIV tests

	Total Test Done	Total HIV Positive	%
Jan 01 – Jun 01	158	5	3.2
July 01 – Dec 01	213	13	6.1
Jan 02 – Jun 02	253	18	7.1
July 02 – Dec 02	147	7	3.5
Total	**822**	**42**	**5.2**

Table II : Age & sex distribution of HIV positive patients

Age group (in yr.)	Male	Female	Total (%)
Less than 20	1	-	1 (2.3)
20-24	7	-	7 (16.2)
25-29	10	3	13 (30.2)
30-34	9	3	12 (27.8)
35-39	8	-	8 (18.6)
40 and above	2	-	2 (4.6)
Total (%)	**37 (86)**	**6 (14)**	**43 (100)**

Table III : Nationality & religion of HIV positive patients

	Hindu	Muslim	Total (%)
Nepalese	29	3	32 (74.5)
Indian	6	5	11 (25.5)
Total (%)	**35 (81.2)**	**8 (18.8)**	**43 (100)**

Table IV : Occupation & socio-economic status of HIV positive patients

SES ? ? Occupation	**Low**	**Middle**	**High**	**Total (%)**
Student	-	1	-	1(2.3)
Housewife	4	2	-	6 (14)
Mobile worker (Nepal)	7	2	-	9 (21)
Mobile worker (India & abroad)	15	6	-	21(49)
Others	-	2	4	6 (14)
Total (%)	**26 (60.5)**	**13 (30)**	**4 (9.5)**	**43 (100)**

Table V : Possible mode of transmission of HIV positive patients

Heterosexual	.....	34 (79.1%)
Homosexual	.....	1 (2.3%)
Injection drug use	.....	6 (13.9%)
Blood transfusion	.....	1 (2.3%)
Perinatal	.....	1 (2.3%)

Table VI : Clinical presentation of HIV positive patients (N=43)

Presentation		**no.**	**%**
Significant wt. Loss/cachexia….		31	(72.9)
Chronic diarrhoea	….	17	(39.4)
Chronic cough	….	12	(27.8)
Fever	….	23	(53.4)
Cancer	….	1	(2.3)
Candidiasis	….	15	(34.8)
Injection drug use (IDU)	….	6	(13.9)
STDs	….	10	(23.2)

period. We detected a total of 40 HIV positive cases within this period. As mentioned earlier, we could persuade to do HIV testing of the wives of some of these patients. Three of them were found to be HIV positive. Two of them were asymptomatic and one had associated STD. During this period a total number of 1131 routine HIV testing was done to blood donors (579 in the year 2001 and 748 in the year 2002). Only one case (0.09%) had been detected to be HIV positive. Thus, a total of 44 HIV positive cases had been detected during the period. Further analysis had been done to 43 cases excluding the case detected during blood donation screening.

Male-female ratio of HIV positive individuals at our centre was 6:1. Twenty (46.4%) patients each belonged to the age range 20-29 years and 30-39 years respectively.

Twenty-five percent (11) of the patient population were of Indian nationality, belonging to the districts bordering Nepal. It is interesting to note that a higher percentage of these patients (5 out of 11) belonged to Muslim community.

Almost 70 percent (30) amongst these patients belonged to a special class categorised as mobile worker – moving from one place to other in search of job/livelihood. Their mobility was restricted within Nepal in some cases (21%); while higher level mobility with workers going to India and other countries were also commonly seen (49%). Most of these workers were unskilled/semi-skilled workers working in Indian metropolis, where they contacted their infection after visiting red light areas there. Amongst 30 mobile workers and businessman, at least 17 (39.5%) had history of visiting commercial sex workers (CSWs) in Mumbai. One person got the infection while working in Goa.

Out of 23 Injection Drug Users (IDUs) admitted during the period, we could do HIV testing in 10 cases. Six amongst those 10 cases were detected positive for HIV infection. Blood transfusion was probably responsible for HIV infection in a young woman, perinatal transmission was responsible for HIV infection in her 2-year-old son presenting with hepatitis, jaundice and severe wasting. Heterosexual transmission was noted in 34 (79.1%) patients. Homosexual contact was responsible for HIV transmission in only one case (2.3%).

Table VII : Clinical AIDS (according to Expanded 'WHO' Case Definition for AIDS Surveillance): (N=43)

Pulmonary & extra-pulmonary TB	12 (27.8%)
Cancer (lymphoma)	1 (2.3%)
Candidiasis (Wt. loss + Dysphagia)	7 (16.5%)
Wt. loss + diarrhoea/fever	8 (18.6%)
Total	**28 (65%)**

A patient may have more than one clinical symptom at the time of presentation; thus added up to more than 100%.

Applying 'Expanded WHO Case Definition for AIDS Surveillance',[6] out of total 43 cases at least 28 (65%) cases could be detected as having suffering from clinical AIDS; 12 (27.7%) of them were suffering from pulmonary or extra-pulmonary tuberculosis.

DISCUSSION

Approximately 5.2% (43) of the clinically suspected population (822) was detected to be HIV positive during last two years at our Universal College of Medical Sciences (UCMS) Teaching Hospital (Table I). A similar paper on HIV infection amongst clinical population has been rare in Nepal.[7,8] At the United Mission Hospital, Tansen, Palpa, 10% (12) of the total 1304 cases, in which HIV test was done over a period of 3 years, were detected to be HIV positive.[8] HIV prevalence among healthy blood donors in UCMS was low (0.09%). This was similar to other reports in the past. I. B. Napit in 2001 reported a prevalence of 0.07% while Shrestha and Gurubacharya in the year 1993 reported a prevalence of 0.22% of HIV positivity in their respective blood donor population.[7,8]

Approximately 60% of the total patient population belong to lower socio-economic group, compelling them to go out of their home in search of job (Table:4). Seventeen patients (39.5%) were in Mumbai where they got themselves infected with HIV after meeting 'commercial sex workers' there. In an official publication of the Ministry of Health, Government of Nepal[9] reported a HIV prevalence of 4-10% among labour migrants to India, especially those migrating to Mumbai from Far-Western Nepal. Approximately 40% of our patient population belonged to this migrant 'mobile patient' group highlighted the same fact again. These mobile migrant workers in our sample population mostly belonged to the South-Central region of Nepal and the adjoining districts of the State of Uttar Pradesh in India.

Since the detection of first AIDS case in Nepal in 1988, Nepal has progressed from a "low prevalence" country to one with so-called "concentrated epidemic" in certain sub-group of the population. Reported prevalence of HIV positivity among injection drug users (IDU) in Nepal is 68%.[9] We could do HIV testing in only 10 out of 23 cases of injection drug users admitted for treatment in our centre during the specified period. Six (60%) of them showed HIV transmission in their blood sample. Eicher et. Al[10] also in their study on the spread of HIV among young injecting drugs in Manipur, North-East India found that almost three-quarters of injection drug users (IDUs) were infected with HIV, most within the first two years of injecting, indicating infection continues to spread at very high rates. High rate of HIV positivity amongst injection drug users in Nepal also exposed them to the dual epidemics of injecting drug use and HIV infection, as it has been reported in other south and south-east Asian countries.[11]

Various possible modes of transmission of HIV infection, that was recorded in our patient population (Table V), was similar to that was of national data of India and Nepal.[1,9] Twelve patients (27.7%) were suffering from pulmonary or extra-pulmonary tuberculosis and diarrhoea/weight loss was marked in 8 (18.6%) of them (Table VII). Tuberculosis and chronic diarrhoea were also the main diagnostic rubric amongst HIV positive inpatients at United Mission Hospital, Tansen, Palpa.[8] Opportunistic fungal infection (oesophageal and oral Candidiasis) was also commonly seen in our patient population. Since we do not have access to other modes of investigations to go for a definitive diagnosis of AIDS, we opted for 'clinical AIDS' according to 'Expanded WHO Case Definition for AIDS Surveillance'.[6] Twenty-eight out of 43 cases (65%) could be clinically diagnosed to have AIDS accordingly (Table VII).

It is not that the health authorities in Nepal are not aware of the potential gravity of the problem the nation is facing. In fact, it has acknowledged the fact that 'we face a generalised epidemic if an expanded response is not initiated immediately[9]. We need more active involvement of governmental agencies, NGOs and other health care societies for the prevention of AIDS at several levels. Screening and education of these workers should be done at exit level from Nepal, entry level to India, employer's level in India and after their return back to Nepal. Prevention at 'primary health care' level should be focussed through the speedy implementation of 'WHO Global Programme on AIDS' and 'National AIDS Control Programmes' of both India and Nepal. Some kind of 'Joint Indo-Nepal Steering Committee' may be formed under the

'National AIDS Control Programme' of both the countries regarding prevention/spread of HIV positive cases from Indian metropolis to Nepal.

CONCLUSION

Though it is rather a small sample study to generalise the findings, still it has some important revelations. Study revealed that uneducated, poor and ignorant young male population from the border areas of India and Nepal are acquiring HIV infection while they are working in Indian metropolis like Mumbai and subsequently spreading it to their homeland. This patient population have the potential to expand and explode the disease in Nepal, which would be a very alarming situation for both India as well as Nepal.

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