

Original Article**Risk profile of HIV positive persons attending Integrated Counselling and testing centre of a tertiary care hospital, Amritsar**

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ABSTRACT

Introduction: AIDS epidemic has spread across all sections of Indian society. Some unique features of the disease like extraordinarily high fatality, taboos associated with it and non-availability of cure makes it different from other STDs. **Objective:** To study the risk behaviour and mode of transmission of HIV in attendees who tested HIV positive at ICTC

Methodology: This was a cross sectional study carried out at Integrated Counselling and Testing Centre at Govt. Medical College, Amritsar from Jan'09 to Dec'09. ICTC was visited thrice a week and by using purposive sampling all the persons (405) who came to collect their positive reports on these three days of the week, were included in the study after obtaining their written informed consent. Data analysis was done by using statistical software Epi Info version 7.

Results: Most of the respondents were males, currently married, educated up-to middle school level and belonging to lower socio economic status. Almost three-fourth (76%) of them acquired HIV infection as a result of unprotected sex, followed by IV drug abuse (20%), blood transfusion (8.4%) and unsafe injections by quacks (1.5%). Majority of them had a single partner (57.5%) and out of those acquiring infection via IV drug use, majority were using shared needles as well as syringes.

Conclusion: HIV infection is found to be more common in males. Sexual route was the commonest mode of transmission. The proportion of respondents acquiring HIV infection via IV drug abuse was found to be significant and much higher in this region as compared to national average.

Key Words: Risk profile, HIV, Integrated Counselling and testing centre

INTRODUCTION

HIV/AIDS is one of the most dreaded diseases that have emerged in recent times. AIDS is spreading from high risk to general population in India, fuelled by an increasingly casual attitude towards sex, coupled with a tradition of public silence and reluctance to grasp the issues [1].

Today, the epidemic affects all sections of Indian society. In the presence of poverty, illiteracy and poor health in our society, the spread of HIV seems to be very challenging [2].

Present trend of AIDS epidemic in India

In India, AIDS epidemic is not only limited to certain high risk groups but it is increasingly spreading from high risk population to general population and from urban to rural population. Also, there is increased feminization of the epidemic, more and more females are getting involved.

HIV/AIDS is not only a medical disease, but also a behavioral disease and it has both biological and socio-cultural determinants. AIDS has some unique features like extraordinarily high fatality and cultural taboos about the modes of transmission and associated behavioral patterns. It is different from other sexually transmitted diseases because no cure is available for it. Also, in absence of preventive vaccine, we have no other option but to rely on behavioral change.

'Integrated Counselling and Testing Centre' (ICTC) is a place where a person is counselled and tested for HIV, of his own free will or as advised by a medical provider [3]. Integrated Counselling and Testing Centre (ICTC) data can identify various risk groups for priority targeted interventions to reduce HIV transmission in the community.

Though a lot of information about the epidemiology of HIV/AIDS is available, but there are certain local factors which drive the epidemic locally. These factors need to be understood for taking appropriate actions for the control of epidemic.

OBJECTIVE

To study the risk behaviour and mode of transmission of HIV in attendees who tested HIV positive at ICTC.

MATERIAL AND METHODS

The present study was a cross sectional study carried out at Integrated Counselling and Testing Centre (ICTC), Govt. Medical College, Amritsar.

Sampling methodology - The study was conducted from 1st Jan'09 to 31st Dec'09. ICTC was visited thrice a week for this whole year. Purposive sampling was used and the persons, who came to collect their positive reports on these three days of the week, were included in the study. A total of 405 subjects were studied in the whole year.

ICTC was located in the Department of Microbiology, Govt Medical College, Amritsar. All the persons who came for HIV testing were counselled before taking the sample (pre test counselling). Then HIV testing was done using the kits recommended by NACO. When people came to collect reports, post test counselling was done by the counsellor at ICTC. All the HIV positive persons who came to collect their positive reports on the specified days were interviewed personally by the author. They were informed about the purpose and nature of the study in a language understandable to them and their informed consent to participate in the study was taken. Every effort was made to maintain the confidentiality of the participants.

Study Tool: Subjects were interviewed by using a semi structured and pre tested schedule. Information collected comprised of socio demographic characteristics of the individuals, their high risk behaviour and mode of contracting HIV.

The data thus collected was compiled and statistically analyzed by using statistical software Epi Info Version 7. The data for age and education was distributed into groups according to National Behavioural Surveillance Survey conducted by NACO. Valid conclusions were drawn.

RESULTS AND DISCUSSION

A total of 405 HIV positive persons were included in the study.

Table 1: Socio demographic characteristics of HIV positive persons

Socio demographic characteristic	N	Percentage
Sex		
Male	248	61.2%
Female	157	38.8%
Marital Status		
Unmarried	42	10.4
Currently Married	298	73.6
Widow/Widower	60	14.8
Divorced	5	1.2
Education		
Illiterate	90	22.2%
Literate + primary	90	22.2%
Middle	136	33.6%
Secondary + higher secondary	79	19.5%
Graduate & above	10	2.5%
Socio economic status		
Upper middle	28	6.9%
Lower middle	107	26.4%
Upper lower	260	64.2%
Lower lower	10	2.5%

Table shows that most of the respondents (61.2%) were males. Majority of them (73.6%) were currently married while 14.8% were widows or widowers and 10.4% were unmarried. Almost one third (33.6%) had education upto middle school, 2.5 percent were graduates or post graduates. Most of them belonged to upper lower socio economic status (64.2%) according to Modified Kuppuswami Socio-economic scale while only 6.9% belonged to upper middle class.

According to NFHS- III, the prevalence of HIV infection in 15-49 year age group is higher (0.36) in males than

in females (0.22). The female to male infection ratio is 0.61 [4]. Similarly, in another study by Kumar A on the profile of clients attending VCTC in Karnataka, it was found that male population constituted 64.7% of the total study subjects [5].

MS Zaheer, in his study on Clinical and Demographic Profile of AIDS patients in and around Aligarh found that male to female ratio was 2.4:1 [6] which was found to be 2.3:1 in a study on HIV positive patients in Trivandrum by SP Nair [7].

Megha Gupta found that in VCTC of a district hospital of Udupi, 78.4 % of the clients were married and 21.6 % were unmarried. 11.1% males and 44.4% females were widowed, divorced or separated [8]. Similar results have been found in a study in Aligarh by MS Zaheer et al that 77.1% were married and out of these, 73.5% were males and 85.7% were females [6]. Anil Mahajan et al, in their study in VCTC at Jammu, observed that 13% respondents were widows or widowers [9].

A high proportion of HIV positive widows found in the study might be the widows of HIV positive persons who died due to AIDS.

Kumar A, in his study on profile of clients tested HIV positive in VCTC in Karnataka, found that 21.4 % were illiterates while only 5% of clients had education up-to College level or above [5].

GK Joardar, in his study in VCTC in west Bengal found that 40.9 % of attendees were illiterates, 23.6% had education level upto class IV, 28.5% had education level from class V to X and only 6.9% had education level above class X [10]

Majority of respondents were from lower socio economic class. This shows that most of the persons utilizing Govt health facilities were from lower socio economic status.

As far as occupation is concerned, out of 248 HIV positive males, majority were either truck drivers (30.6%) or farmers (29.8%). Among the females, out of 157, a majority, 134 (85.4%) were housewives. Drivers are recognized as a high risk group in AIDS. Commercial sex work is an important source of HIV infections in India and long distance truckers form a majority of clients of CSWs. Also they are more exposed to other high risk behaviors like IV drug abuse. In a study by S Chaturvedi on sexual behavior among long distance truck drivers, 57.24% drivers gave history of exposure to CSW [11]. A larger percentage of farmers may be because of the fact that majority of

persons included in this study were from rural areas and agriculture is an important occupation for rural people. According to Punjab Development Report, agriculture is the major employer of Punjab workforce and it accounts for 39.4% of total workforce [12]. This also shows that AIDS is spreading from high risk groups to general population.

Among females, most are housewives and they might be infected by their HIV positive husbands. Similar findings have been reported from other studies as well. MS Zaheer, found that 29.4% of males studied were drivers and out of females, 64.3% were housewives who had contracted HIV infection from their already infected husbands [6].

GK Joardar, in his study in VCTC in West Bengal, found that 88.2% of HIV positive women were housewives [10].

Table 2: Distribution of HIV positive persons according to route of transmission of HIV infection

Route of HIV transmission	Number	Percentage
Unprotected sex	328	80.9%
Infected blood	34	8.4%
IV drug use	81	20.0%
Injection by quacks	6	1.5%

Table shows that out of the 405 participants studied, a majority 308(76%) of them were positive as a result of unprotected sex, 81(20%) due to use of IV drugs and 34(8.4%) as a result of unsafe blood transfusion. 6 (1.5%) persons attributed their HIV positive status to injections by quacks who usually use unsterile syringes/needles. Some of the respondents were practicing more than one high risk behavior and they were not sure about the cause of HIV infection among them. So, more than one route of transmission was considered in such cases.

According to NACO, information from persons testing positive for HIV at the Integrated Counseling and Testing Centres across the country during 2009-2010 shows that 87.1 percent of HIV infections are occurring through heterosexual route [13].

Basanta K. Pradhan and Ramamani Sundar, in their study, reported that heterosexual route of HIV infection was commonest accounting for almost 80% cases [14]. Similarly, heterosexual exposure in 84% persons attending VCTC has been reported by Anil Mahajan et al [9]. Usha Arora, in study of HIV infection in and around Amritsar in 2006 found that 91.02% patients were infected through heterosexual route [15]. In

another study on HIV patients in Trivandrum, SP Nair observed that sexual route was the commonest mode of transmission found in 78.5% patients [7].

M S Zaheer, in his study in Aligarh found that the commonest mode of transmission (56.3%) was due to sexual contact [6] In a study by V Gupta, on patients attending a tertiary care hospital in Chandigarh, heterosexual transmission was found to be the predominant mode of HIV infection (97.76%) [16]. In another study, heterosexual route was the most common mode of transmission of AIDS in 80.4% of cases. (Chakravarty J et al,2006) [17].

Table 3: Distribution of HIV positive persons according to number of sex partners

Number of partners	Number	Percent
1	233	57.5%
2-3	104	25.7%
>3	50	12.3%
Nil	18	4.4%
Total	405	100.0%

Table shows that 233 (57.5%) were having single partner, 104 (25.7%) were having 2-3 partners, 50 (12.3%) were having more than 3 partners and 18 (4.4%) were not sexually active.

This large number having a single sex partner may be because many persons are HIV positive as a result of other causes apart from sexual route. Also, most of the female respondents were housewives with a single partner. Many people might not be revealing that they were having multiple partners. Thus the proportion of respondents reporting to have multiple sex partners is less as compared to that found in other studies.

In a study at VCTC of a tertiary hospital in south India by A Kumar et al, it was observed that 87% respondents had multiple sex partners [5]. Neerja Jindal and Usha Arora, in their study on police personnel attending VCTC, found that almost 90% were having multiple sex partners [18].

Table-4 shows that a majority of persons i.e. 67 (82.7%) were using shared and used needles for IV drug abuse, while 10 (12.3%) were using shared and disinfected needles and only 4 (4.9%) were using new and unused needles whereas in case of syringes, 73 (90.1%) were using shared, 8 (9.9%) were using shared and disinfected and none was using new

syringes. The cause of HIV infection in persons using new needles can be because of sharing of syringes which can also result in transmission of HIV. This shows that some people prefer to use new needle but not new syringe for IV drug injections. There is a need to create more awareness that HIV transmission is possible via infected syringes also.

Table 4: Distribution of HIV positive persons according to type of needles and syringes used for IV drug injections (N=81)

Type of needles/syringes	Needles		Syringes	
	No.	Percent	No.	Percent
Shared, used	67	82.7%	73	90.1%
Shared, disinfected	10	12.3%	8	9.9%
New, unused	4	4.9%	0	0.0%

Out of 34 respondents who were HIV positive as a result of receiving infected blood transfusion, none was aware that they received blood from a registered blood bank. While 4(11.8%) knew that the blood bank was not registered, 30(88.2%) were not aware about the status of registration of the blood bank from where they received blood for transfusion. This shows that the respondents had a low level of awareness that blood should be taken from a registered blood bank only.

CONCLUSION

HIV positive status is more common in males. Most of the HIV positive persons were currently married and belonged to upper lower socio economic status. Almost a third had completed their education upto middle school level while only a minor proportion was educated upto graduation or higher level. Sexual route was the commonest mode of HIV infection transmission. The proportion of respondents acquiring HIV infection via IV drug abuse was found to be significant and much higher as compared to national average.

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