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SOCIO-DEMOGRAPHIC PROFILE AND RISKY BEHAVIOUR PATTERN OF PATIENTS REGISTERED AT ART CENTRE, PATIALA, PUNJAB

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ABSTRACT

Background: The HIV epidemic in India shows declining trend overall. After the start of free ART treatment in 2003, ART centres are increasing in phased manner in the country, which transformed the common perception about HIV from being a "virtual death sentence" to a "chronic manageable illness. **Objectives:** To study the Socio-demographic characteristics and risky behaviour pattern of the patients registered at ART centre.

Materials and Methods: A record based retrospective analysis of 548 patients, at ART centre Govt. Rajindra Hospital, Patiala.

Results: Most patients falls in age group of 30-39 years with median age of 37 years, males (63.87%) and females (36.13%); 72.45% patients were married. 40.15% were illiterate followed by primary (34.67%), secondary (20.44%), college & above (4.74%). Patients from rural background were (69.71%). More than half the patients were employed (55.11%), followed by unemployed (21.53%), house wife (17.52%) and students /children (5.84 %.). Among employed, farmer constituted (16.42%), construction worker (13.87%) and driver (11.31%). Among drivers, 42% were truckers. Majority of patients (87.41%) were referred from VCTC. The most common route of transmission of HIV was heterosexual route (58.03%).

Conclusion: Low socioeconomic status and high risk behaviours have been found to be significantly associated with HIV infection.

Key Words: ART, HIV, Heterosexual.

INTRODUCTION

Since the detection of HIV infection in Commercial Sex Workers (CSWs) in Tamil Nadu in 1986, the infection is growing very fast in the country[1]. India epidemic is marked by heterogeneity- not a single epidemic, but made up of a number of distinct epidemics, in some places with in the same state [2]. The epidemic in India shows a declining trend overall, with an estimated 2.27 million PLHIV in 2008 decreasing to 1 lakh in 2011[3]. National adult (15–49 years) HIV prevalence is estimated at 0.26% (0.22%–0.32%) in 2015 with 0.30% among males and 0.22% among females.[4] Heterosexual mode of HIV transmission accounts for 88.2% of HIV positive cases detected, mother to child transmission accounts for 5.0%, Infected Syringe and Needle 1.7%, Homosexual 1.5% and contaminated blood and blood products account for 1.0% of HIV infections according to NACO.[5] Prevalence of HIV in intravenous drug users in Punjab is 21.1%, FSWs (0.85%), MSM (2.18%), Migrant (1.20%), and truckers(1.07%)[6]. Data by NACO shows the trends in various sub-groups of population at national level, but information related to other aspects of socio-demographic profile of patients for individual districts is lacking, which needs to be gather by respective States Aids Control Societies (SACS) and analyze to develop strategies effective at local level.

Declining trends in adult HIV prevalence are sustained in all of the high prevalence States (Andhra

Pradesh & Telangana, Karnataka, Maharashtra, Manipur, Nagaland and Tamil Nadu) and other States such as Goa, Odisha and West Bengal. However, rising trends in adult HIV prevalence has been observed in some of the hitherto relatively low prevalence States/UTs like Assam, Chandigarh, Delhi, Jharkhand, Punjab, Tripura and Uttarakhand. Punjab have 1-2.4 thousand new infections among adults and the rest of the States/UTs have less than 1 thousand new adult HIV infections in 2015. Analysis of drivers of the emerging epidemic in some low prevalence States points towards the possible role of out-migration from these States to high prevalence destination[4]

Current study was done with the objective to study the socio-demographic characteristics and risky behaviour pattern of the patients registered at ART centre, Patiala. This will provide important clues to understand the cause of rise in HIV cases in Patiala by triangulation of data and epidemiological profiling of HIV cases at district level, thus gave more comprehensive picture of the HIV/AIDS epidemic scenario, which will further provide useful insights to PSACS and district health authorities on what needs to be done to consolidate achievements made so far and to plan local intervention in implementing various Information, Education, and Communication (IEC) and Behaviour Change Communication (BCC) activities.

MATERIALS AND METHODS

This is retrospective data analysis of 548 patients, who are put on ART therapy, out of 1038 patients, registered at ART centre Rajindra Hospital, Patiala, between 1Jan 2009 to 31 Dec 2009 and data was analyzed, based on their records related to socio-demographic profile, risk factors and reference institute. Eligible patients were aged 0 to 60 or above and were diagnosed HIV positive, by standard COMBAIDS diagnostics kit as per NACO guidelines. Since it is retrospective record based study, clearance was secured from Govt. Medical College and Hospital, Patiala Ethical committee and study was started after their approval.

The Data was collected, complied and analyzed from pretested structured Proforma provided by NACO (National Aids Control Organization) using Microsoft excel 2007 and Analyzed through Statistical Package for Social Science (SPSS 16.0) software program for Windows.

RESULTS

Table 1 shows the socio-demographic profile of study subjects.

Table 1: Socio-demographic characteristics of patients

Variable	Patient (N=548) (%)
Age Distribution	
0-9	17 (3.10)
10-19	20 (3.65)
20-29	76 (13.87)
30-39	217 (39.60)
40-49	139 (25.36)
50-59	56 (10.22)
>60	23 (4.20)
Sex	
Male	350 (63.87)
Female	198 (36.13)
Marital status	
Married	397 (72.45)
Widowed	72 (13.14)
Single	70 (12.77)
Divorce	9 (1.64)
Live in	0 (0.00)
Educational Status	
Illiterate	220 (40.15)
Primary School	190 (34.67)
Secondary School	112 (20.44)
College and above	26 (4.74)
Geographic distribution	
Urban	166 (30.29)
Rural	382 (69.71)
Income	
<2000	154 (28.10)
2000-5000	254 (46.35)
5000-10,000	86 (15.69)
>10,000	54 (9.85)
Occupational status of patients	
Employed	**302 (55.11)**
1)Farmer	90 (16.42)
2)Army/Paramilitary	4 (0.73)
3)Police/Home guard	15 (2.74)
4)Other Govt. Employee	7 (1.28)
5)Construction worker	76 (13.87)
6)Grain Market Worker	4 (0.73)
7)Driver	***62 (11.31)***
(a) Combiner Harvest	*7 (1.28)*
(b) Car	*22 (4.01)*
(c) Bus	*7 (1.28)*
(d) Truck	*26 (4.74)*
8) Others	44 (8.03)
Students/Children	32 (5.84)
Housewife	96 (17.52)
Unemployed	118 (21.53)

Almost 65% patients were aged between 30 to 50 years with median age of 37 years. Males constitute 63.87% and female (36.13%). Majority of patients were married i.e. 72.45%, followed by widowed (13.14%), single/unmarried patients (12.77%), divorced (1.64%) and no patient was in live- in relationship. With regards to the level of education, majority were illiterate (40.15%), primary (34.67%), secondary (20.44%), college &above (4.74%) and 69.7% were from rural background. Regarding education status, majority were illiterate (40.15%), primary

(34.67%), secondary (20.44%), college &above (4.74%). Majority of patients in the current study belongs to economically weaker section of the society with monthly family income below 10, 000 rupees in more than 90% of study subjects. In the present study drivers constitute (11.31%) of the total study sample ,out of them truckers constitute almost 42% of the total drivers in the study, car/taxi drivers (35.48%), combine harvester and bus drivers make 11.29% each of the total drivers. In the present study govt. employees constituted just (1.28%), Army /paramilitary and grain market workers constituted 0.73% each of the total patients.

Table 2: Source of referral of HIV positive patients to ART centre

Reference Institution	Number (n=548) (%)
VCTC	479 (87.4)
TB/RNTCP	2 (0.4)
Out Patient	6 (1.1)
Inpatient	5 (0.9)
Paediatrics	0 (0.0)
PPTCP	7 (1.3)
STI Clinic	4 (0.7)
Private Practitioner	9 (1.6)
Other NGO	4 (0.7)
Self Referred	0 (0.0)
Sex worker TI	0 (0.0)
PLHA Network	0 (0.0)
MSM TI	0 (0.0)
Other NGO	32 (5.8)

Table 3: Risk factors of HIV among the patients

Risk Factors	Number (n=548) (%)
Heterosexual	318 (58.03)
MSM	2 (0.36)
IDU	13 (2.37)
Blood Transfusion	34 (6.20)
Mother to Child	30 (5.47)
Probable unsafe injection	101 (18.43)
Sex Worker	2 (0.36)
Unknown	48 (8.76)

Table 4: Co-infections in patients on ART therapy

Carrier	Number (n=548) (%)
HBV	
Yes	35 (6.3)
No	352 (64.23)
Unknown	161 (29.37)
HCV	
Yes	25 (4.56)
No	327 (59.67)
Unknown	196 (35.77)
STI	
Yes	69 (12.59)
No	479 (87.41)

Source of referral of HIV positive patients to ART centre: Table 2 shows the source of referral of patients to ART centre, Rajindra Hospital Patiala. Majority of patients (87.41%) were referred from VCTC, followed by other NGO (5.84%), PPTCP (1.28%), private practitioner (1.64%), TB/RNTCP (0.36%), and STI clinic (0.73%).

Risk factors of HIV among the patients: Table 3 shows the pattern of risk behaviour of study subjects. The most common route of transmission of HIV was heterosexual route (58.03%), followed by probable unsafe injection (18.43 %), blood transfusion (6.20%), and mother to child (5.47%), IDU (2.37%), MSM (0.36%) and sex worker (0.36%).

Co-infections in patients on ART therapy: Table 4 shows the co-infections of HBV, HCV and STIs in HIV positive patients which are important public health problems and share the same modes of transmission as HIV, hence co-exist in the same host at significantly higher rates. In the present study, HBsAg was positive in 6.3% patients and anti hepatitis C antibody was positive in 4.56% patients .12.5% patients have present or past history of STIs.

DISCUSSION

HIV occurs in reproductive age group, studies done in Gujarat and Andhra Pradesh in India[7,8] and Tanzania in Sub-Saharan Africa [9] reported results consistent with present study with median age of 37 years. Prevalence is more in males than females as reported in other studies.[7-10] Majority of patients were married in concordance with studies[10-13].Most of them were illiterate, similar finding was reported by study done in Karnataka [14]. But in contrast to above findings, the study done by Gupta et al [15] reported illiteracy in just 13.4% of male and 28.5% of female sero-positive patients. Person who has literacy level below secondary school may not have adequate knowledge about various measures used to protect him/her from sexually transmitted diseases (STDs) and HIV. In general, it was observed that the awareness and knowledge of HIV/ AIDS remained to be weak in the rural areas and especially among women [16]. This observation of predominance of HIV in rural communities indicates its spread from urban areas to vast rural population.

Occupation profile of patients showed that farmers constitute 16.8% of employed, which is almost double than that reported by Naik et al[12], but the findings of the current study were in contrast to the study conducted in Karnataka by Jayarama et al[13], where patients from agricultural sector were just (2.8%). In comparison to present study where construction workers/labourer constituted (13.87%), Jayarama et al[13], has 19.1% of the patients as labour-

ers, probably because the study is done in urban industrial area in Mangalore, whereas a study done in Surat city of Gujarat state reported, 32.9% of the patients were labourers.[7]

In the present study drivers constitute (11.31%) of the total study sample, which is more than thrice (3.08%) reported by Jayarama et al[13], but consistent with the results reported by studies done by Sharma et al[17], Chennaveerappa et al[14], and study done in Darjeeling by Joardar GK et al[18] which showed 10.4%, 12.3% and 13% of patients as drivers respectively. In the current study, truckers constitute almost 42% of the total drivers in the study, car/taxi drivers (35.48%), combine harvester and bus drivers make 11.29% each of the total drivers. Truckers and combine harvester drivers are also quite common in Punjab being an agro industry prominent state in India and frequently travel to other states of India. This is the bridging and high risk population who are spreading the infection to their housewives; low education status, migration, and less awareness regarding safe sex can be the reason for high prevalence among these groups of people.

Police / home guard (2.74%) were much less in comparison with Sharma et al[17], which showed 8.5%, probably because the study by Sharma et al was done in AIIMS , a large tertiary level teaching hospital and referral centre located in north India, attending to HIV-infected from neighbouring states like UP an Bihar. It is clear from the data, that Punjab being the agriculture state with almost 70% population residing in rural areas, farming is the most common occupation that is reflected in patient's occupation classification. Migrant labourers and construction workers from other states are also quite common in Punjab particularly during sowing and harvesting seasons. This is bridging population which is spreading HIV to their wives when they return home. Such "truncated epidemics" are characteristic of rural areas of India as men may not engage in high-risk behaviours when they are close to home.

The present study reported majority of referrals from VCTC and very less contribution from other target intervention sites (TIs) and private doctors. Strong referral linkages were found to be missing. Another study done in Gujarat has 50% referral from VCTC and 23% from private practitioners [7]. There is an urgent need to empower NGOs and to establish cross referrals from RNTCP, STI clinics, PPTCT and other TIs.

The most common route of transmission of HIV was heterosexual route followed by probable unsafe injection, blood transfusion, and mother to child, IDU, MSM and sex worker respectively. Comparable results reported by studies done in other parts of India.[12-15, 20-21]

In the current study, Hepatitis B and C virus carriers are 6.3% and 4.3% respectively. A study on Co-infections was conducted by Mahajan et al in Jammu and has reported hepatitis B co-infection of 3.4% [22], another study done in Maulana Azad medical college has shown co-infection with hepatitis B and C, virus as 9.9% and 6.3% respectively [23]. Ponamgi et al has results in concordance with present study [8]. Naik et al has reported STI prevalence of 16.4% which was higher than current study[12]. It is important to find regional prevalence of these co-infections as there is wide variation in different studies conducted in India and outside. Geographical variation may be due to different risk factors and type of exposure. Early identification will reduce morbidity and improve quality of life of HIV patients.

CONCLUSION

In conclusion low socioeconomic status, illiteracy and high risk behaviours have been found to be significantly associated with HIV infection. Truckers and migrant labourers were important bridging population in current study.

RECOMMENDATIONS

Strong referral linkages needs to be established/strengthened with community based organizations (CBOs) and NGOs. Patient's referral from STI/Suraksha clinics, DOTS centre, private practitioners, Target interventions sites, particularly for migrants and truckers need to be intensified which will help in early diagnosis of HIV cases and prevention of new infections in bridging population. IEC/BCC activities are to be done in local language keeping in mind social norms and cultural beliefs with community participation particularly among rural masses, so that they can be made aware about HIV and motivated to avail the services of VCTC and ART centres.

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