ID: JCDR/2012/3375:2032

Original Article

Microbiology Section

Profile of the Patients Who Attended the HIV Integrated Counseling and Testing Centre in a Teaching Hospital of Rajasthan, India

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ABSTRACT

Context: Community awareness is the simplest way to limit the spread of the human immunodeficiency (HIV) infection in the population.

Objectives: To study the sociodemographic characteristics and the perception about the disease among the attendees of an HIV clinic.

Material and Methods: It was a cross-sectional, questionnaire based, observational study which was conducted between years 2008 and 2011 at the integrated counseling and testing centre (ICTC) of a teaching hospital in Rajasthan, India.

Results: Out of 7561 subjects who were screened, the seroprevalence of HIV was seen in 109 (1.44%) cases. More visits to the ICTC were made by males (5973) as compared to females (1588), but the positivity rate was higher among females (2.64%) than among males (1.12%). Among all the subjects, about 80% of the seropositives belonged to the age group 15-49 years, 38.5% were illiterate, and more than 30% of the positive cases were housewives. Heterosexual (92%) and vertical transmission (8%) were the only modes of transmission. Seropositivity was more prevalent among the subjects who belonged to the below poverty line (58.7%). More than half (52%) of the respondents considered the HIV infection to be preventable and three fourth (75.73%) had no objection in staying in the same house as the infected cases, whereas only 33.4% of them were comfortable in sharing food with the HIV patients. Two thirds of the attendees were aware of the role of barrier contraceptives in the prevention of the HIV infection. However, there was a lack of awareness about the government intervention programmes.

Conclusion: The screening of females in the population needs to be strengthened, possibly by universal antenatal coverage. Despite the ongoing campaigns, there is a lack of appropriate awareness in the population and hence, there is a need of interventions which focus on the dissemination of information even to the most peripheral and unreached areas.

Key Words: Human immunodeficiency syndrome (HIV), Acquired Immunodeficiency syndrome (AIDS) Integrated counseling and testing centre (ICTC), patient perception

INTRODUCTION

India shares one tenth of the global HIV burden and an overall 65% is attributed to south and south east Asia [1]. As per the current estimates of Rajasthan State's AIDS Control Society (RSACS), approximately 70,000 people in Rajasthan are living with HIV/AIDS, in which the confirmed cases are about 40,000, putting the state in the low prevalence category. The Integrated Counseling and Testing Centre (ICTC) provides information about the HIV prevention, counseling to undergo testing, it provides testing facilities and it also links the seropositive people with treatment, care and support systems [2]. The present study reveals the prevalence of the HIV prevalence pattern and the availability of ICTC services in our district. Moreover, this study was aimed at creating awareness and motivation for the optimum utilization of the available health services.

MATERIALS AND METHODS

The study was carried out at the ICTC of a teaching hospital at Jhalawar, Rajasthan, from December 2008 to July 2011. It was a cross-sectional, questionnaire based, observational study which was carried out to assess the sociodemographic characteristics and the perception about the disease among the attendees of the ICTC. This study was approved by the institute's ethics committee and a written informed consent was obtained from all the subjects. All the attendees were tested for HIV seropositivity (Comb Acids HIV Immunodot test kit, Span Diagnostics, India) and were then asked to fill a predesigned questionnaire. The information was entered by using Microsoft Office software and it was evaluated by using descriptive ('t' test) statistics.

RESULTS

Out of the 7561 attendees of ICTC, one hundred and nine (1.44%) were found to be seropositive. There were no positive cases for HIV 2. A rising positivity rate was observed during the initial period, with the highest number of seropositive cases being observed in 2009 (2.47%). However, this trend was found to reduce later [Table/Fig-1].

The distribution of the seropositive cases by their age, sex and relative prevalence among males and females are shown in [Table /Fig-2]. The seropositivity was more among males and female attendees (5973) were more in the ICTC as compared to females (1588), but the relative percentage of the positive cases was more in females (2.64%) than in males (1.12%). The maximum number of seropositive cases was seen in the age group of 25-34 years (males -29, 26.60% and females -17, 15.60%). Among the 10034 women who were screened during the antenatal checkups, 12 were

Year	Total subjects screened	Number of positive cases	Prevalence
2008	793	12	(1.51%)
2009	1735	43	(2.47%)
2010	2580	38	(1.47%)
2011	2453	16	(0.65%)
Total	7561	109	(1.44%)

[Table/Fig-1]: Yearwise HIV seropositivity among subjects

Age (yrs)	Seropositive Females (%)	Seropositive Males (%)	Total Seropositive
0-14	07 (6.42%)	02 (1.83%)	09
15-25	05 (4.56%)	06 (5.50%)	11
25-34	17 (15.60%)	29 (26.60%)	46
35-49	13 (11.93%)	28 (25.69%)	41
>50	00	02 (1.83%)	02
Total	42 (2.64%)	67 (1.12%)	109

[Table/Fig-2]: Age and sex distribution of seropositive cases (Total females screened = 1588, Total males screened = 5973)

found to be seropositive. The sociodemographic characteristics of 109 positive cases are presented in [Table/Fig-3]. Fair numbers of positive cases were found in the same family, which included the spouses (34.8%) and their children (6.4%). Heterosexual behaviour was the commonest mode of transmission (92%) of the HIV infection among our subjects. The seropositive cases were more among the subjects who were below the poverty line (58.7%) than among those who were above the poverty line (41.28%). Only one fifth of the cases which were found to be positive among the ICTC attendees were obtained from voluntary testing. The rest were either referred by doctors (54%) or by an NGO (28%).

Out of the 7561 subjects, 6002 attendees were able to completely answer the questionnaires which were included in the study. Female attendees were less than one third as compared to the males. More than 60% were married. Unprotected sexual exposure with persons other than their spouses was found in around 18% of the cases. Television and radio were two important sources of information for awareness about this disease among the subjects. More than half of the attendees were regularly using either alcohol, tobacco or opium.

Knowledge about the Transmission of the HIV Infection

HIV/AIDS was reported as preventable by 52% respondents, whereas 9% attendees only knew some HIV infected patients. Only about 31% of the attendees were able to rightly identify the modes of transmission of this virus, such as by blood transfusion, mother to child transmission, unprotected sexual contact and by other means.

Attitude Towards the Patients

A majority of the attendees (88.4%) had no objection in allowing the HIV/AIDS patients to stay in the same village or locality .Around three fourths (75.73%) of the participants had no objection in staying in same houses as the HIV infected persons, whereas only 33.4% of them said that they would share food with the HIV patients. Only about one out of three said that they would buy fresh vegetables or food items from shopkeepers who were infected with HIV. But a majority (93.4%) of the attendees was unwilling to accept HIV infected individuals as teachers, even if they were not sick.

Profiles/ variables	Number and percentage {total seropositive cases (n) =109*}
1. Education	
Illiterate	42 (38.53%)
Primary (5th)	21(19.27%)
Secondary (10th)	27(24.78%)
Higher secondary (12th)	06 (5.5%)
Graduate and above	06(5.5%)
< 05 yr	07(6.2%)
2. Occupation	
Housewife	33 (30.27%)
Driver	23 (21.10%)
Service	02 (1.83%)
Farmer	08 (7.33%)
Businessman	16 (14.67%)
Labour	16 (14.67%)
Student	04 (3.66%)
< 05 yr	07 (6.42%)
3 .In family seropositive (45)	
Spouse	38(34.86%)
Baby	07(6.42%)
4. Mode of transmission	
Heterosexual	100(91.74%)
Vertical	09 (8.25%)
5. Economical status	
Below poverty line (BPL)	64 (58.71%)
Above Poverty line (APL)	45 (41.28%)
6. Type of referral	
Self	22(20.18%)
NGO	28(25.68%)
Doctor	59(54.12%)

[Table/Fig-3]: Socio-demographic Profile of Seropositive Cases

Awareness of the Programme Intervention

Two thirds of the attendees were aware of condom use and they knew its advantages. The knowledge on the condom was acquired by the health workers and their friends. About 40 % had attended or participated in some campaign or meeting on HIV/AIDS. However, the study population had very poor knowledge about the disease and about government interventions such as the role of drugs in the prevention of the mother to foetus transmission of the HIV viruses, free drug distribution systems for the HIV infected patients and about the appropriate timing to start with the treatment of the HIV patients.

DISCUSSION

Our study highlights that the screening of females in the population needs to be strengthened, possibly by universal antenatal coverage. Despite the ongoing campaigns, there is a lack of appropriate awareness in the population and hence, there is a need of interventions which are focussed on the dissemination of information to the most peripheral and unreached areas.

The prevalence rate which was observed in our survey (1.44%) was less than that which was found in the study which was conducted by Solabannavar SS, et al (4.9%) and than the rates from studies which were conducted in south Karnataka (9.6%), West Bengal (17.1%) and Gujarat (4.8%), [3,4,5,6]. The low

prevalence which was found in our study may be due to the fact that these centres mainly catered to the rural population of the backward districts. The relative percentage of the HIV infected cases was found to be higher in females (2.64%) as compared to that in males (1.12%), which was in contrast to that which was found in studies which were done by Solabannavar et al [3] and Rashmi Sharma [6]. However, in all these three studies, males were found to have a higher total seropositivity than females. This may be due to the fact that a greater number of males were screened and because infected males were more prevalent in a particular group. More relative seropositive cases were reported in females, which was similar to the findings of a study from Pune city [7]. Seven children had acquired the infection by vertical transmission and twelve pregnant women were suffering from the HIV infection. About 80% of the seropositives belonged to the age group of 15-49 years, which was slightly lower than the national figure (90%), 92.4% seropositives were observed in another study which was conducted at VCTC in Darjeeling [5] and 88.7% were observed in south Karnataka [4]. This age group also formed the economically active population and so this disease seemed to threaten our country's economy. One study estimated that the total annual economy loss which was caused by HIV/ AIDS in India was about 3447 billion [8] and so effective measures seemed to be needed to create awareness among this reproductive age group, so that the country's economy did not suffer. An inverse relationship of education and economical status of this disease prevalence was reflected in our study, as only 5.5% seropositive cases had above 12th standard education (graduation and post graduation). It may be interpreted that the education level offers some protection against the HIV virus. Unprotected heterosexual contact was the commonest mode of transmission and this finding was supported by the findings of Kumar et al and Joardar et al, [4,5]. An alarming fact was observed in the present study, that the HIV prevalence was the highest among housewives (33%), followed by migrant drivers. This might be due to the fact that in the male dominated society of rural India, the women's inability to negotiate for safe sex and the moreover small localities which were studied, as in the present study, where there is absence of identified sex areas, enhances the probability of unprotected sexual activities, which might accelerate the ice-berg phenomenon of HIV. Illiteracy is common in women, which also affects it adversely.

However, there are a few limitations in our study which necessitate caution in applying our results to the population in general. Firstly, ours being a teaching hospital based study, our results may not be clearly representative of the community prevalences and secondly, we have only looked at the subject perceptions about the basics of the disease. A study which evaluates the psychological aspects of the perception and the disease burden may provide a better insight into this topic.

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FINANCIAL OR OTHER COMPETING INTERESTS:
None.

Date of Submission: **Sep 29, 2011**
Date of peer review: **Jan 08, 2012**
Date of acceptance: **Apr 05, 2012**
Date of Publishing: **Apr 15, 2012**