



SEROPREVALANCE OF HIV AMONGST THE PATIENTS ATTENDING ICTC CENTRE AT GMC, RAJOURI, J&K

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ABSTRACT

Introduction- HIV/AIDS has turned out into global pandemic. Integrated Counseling and Testing Centre (ICTC) is an entry point to care and support services, which provides people with an opportunity to learn and accept their HIV serostatus in a confidential environment.

Aims and Objectives- To study the prevalence of sero-positivity of HIV infection among clients attending ICTC at GMC, Rajouri from January 2016 to December 2020.

Methodology- All the essential information was collected after interviewing the attendees. HIV antibodies were tested as per the NACO guidelines.

Results- A total of 28 (0.43%) out of 6,503 who were tested for HIV were sero-positive. Among HIV sero-positives, 20(71.42%) were males, 8 (28.57%) were females. Majority of seropositive were between the age group of 30-39 years. Positives were more amongst married, secondary school educated and housewives.

Conclusion- ICTC have proved to be a critical interface between the client and the public health system where any client can know about his or her HIV status in resource limited nations.

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INTRODUCTION

HIV continues to be a major global public health issue, having claimed 34.7 million lives so far. There were an estimated 37.6 million people living with HIV at the end of 2020. 690 000 people died from HIV-related causes in 2020 and 1.5 million people were newly infected. [1]

In India, there were 69.22 thousand estimated new HIV infections in 2019. Maharashtra was estimated to have the highest number of new HIV infections in 2019 (8.54 thousand), followed by Bihar (8.04 thousand), Uttar Pradesh (6.72 thousand), West Bengal (3.97 thousand), Gujarat (3.37 thousand) and Delhi (2.99 thousand). Nationally, 58.96 thousand AIDS-related deaths were estimated in the year 2019. J&K is a low prevalence state. However, in the past few years the prevalence of HIV has slowly tightened its grip as over 4,300 patients, including 131 orphans and 225 widows, have been tested HIV positive in the state so far. [2]

Our national programme on AIDS mainly revolves around counseling which is delivered through Integrated Counseling and Testing Centre (ICTC). ICTC provide the first interface between the client and the public health system to know their HIV status confidentially. [3] Pre- and post-test counseling is among the standard components of prevention, addressing to psychological needs.

It is an oriented HIV antibody testing program which has an important role in health care. [4]

The ICTC data is important to throw light on the seroprevalance and epidemiological profile of HIV positive individuals. This will help not only to identify the various risk groups but also give direction for priority targeted intervention to reduce HIV transmission in the community. With this background, present study was undertaken to study the seroprevalance of HIV infection among the patients attending ICTC at GMC, Rajouri from January 2016 to December 2020.

MATERIAL AND METHODS

This was a retrospective study of patients who attended the ICTC centre of Government Medical College Rajouri, J&K, from 1st January 2016 to 31st December 2020. Direct walk-in clients as well as referrals were included in the study.

The protocol for HIV testing was completely in accordance to National AIDS Control Organization (NACO) guidelines, which included pretest counseling, informed consent, HIV testing, post-test counseling and maintaining confidentiality.

All the clients attending the ICTC were pre-counseled and informed consent was taken from them by ICTC counselor. After obtaining informed written consent, demographic profile including age, gender, education, occupation, marital status was recorded. Information obtained from the counseling and the HIV test results were documented and linked by a number

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assigned to each client at time of first contact with the centre called Personal Identification Digit (PID).

Sample Collection and Processing

Five milliliters (ml) venous blood sample was collected in a sterile plain container from all clients who consented for HIV testing. Blood was allowed to clot for 30 min at room temperature (25-30°C) and serum was separated after centrifugation at low speed.

HIV Serology

HIV antibodies were tested by three rapid tests protocol as per the guidelines laid down by the World Health Organization (WHO testing strategy III) and the testing policy of NACO, Government of India. Antibodies to HIV (1 and 2) were tested initially with a COMBAIDS - RSAdvantage - ST (ARKRAY Healthcare Pvt. Ltd.). The samples tested positive in the first method were subjected to tests with two different rapid tests, that is, AidsCan HIV- 1/2 trispot test kit (Bhat Bio-Tech India (P) LTD and Erbalisa HIV 1+2 (Transasia bio-medicals Ltd).

The protocol of the rapid tests performed as per NACO guidelines was as follows: first test kit was of highest sensitivity and the specificity increases with second and third kit. Therefore, when the test with first test kit is negative, second and third kit tests were not carried out and the result is negative for that tested sample. If the first test is positive, then second and third rapid kit tests were performed and if these two tests were also positive, then the final result was given as positive for that tested sample. [5]

All tests were done according to the manufacturer’s instructions. Strict external quality Assurance program was also followed with state reference laboratory (SRL).

RESULTS

A total of 6503 patients were provided counseling and testing services in ICTC of our hospital from Jan 2016 to Dec 2020. Maximum number of patients (1407) attended ICTC in year 2018 and the least in 2020 (652). [Table 1] About 93.83% (6102) of the attendees were referred by the practitioners while only 6.1% (401) were direct walk-ins.

It was observed that out of the total 6503 samples tested, 28(0.43%) samples were found to be HIV seropositive. Of 28 seropositive persons, 20(71.42%) were males while 8 (28.57%) were females. [Table 2]

Out of 28 seropositive persons, maximum seropositivity i.e (12/2730) was found in the age group of 30-39 years followed by 20-29 years age group i.e. (9/1782). In the age group of 40-49 years seropositivity was found in (3/1150) persons. In the age group of less than 19 years seropositivity was found in (3/428) persons followed by (1/413) seropositivity in the age group of 50 years or more. [Table 2] 65.51% of the seropositive patients were married. Singles comprised only 17.24% of the scenario. [Fig 2]

On observation of educational background, maximum infected patients (51.72%) were secondary school educated, followed by illiterate (24.13%). Least number (10.34%) was those who had completed their college education. [Fig 3] 28.57% of the clients were housewives followed by service class and laborers (21.42%) each. Defense personnel’s constituted 17.85% of the seropositive cases. [Table 3]

Table 1 Distribution of patients attending ICTC from 2016 to 2020

Year	No. of patients visiting ICTC	No. of patients seropositive
2016	1296	5
2017	1405	6
2018	1607	6
2019	1443	8
2020	752	3
Total	6503	28

Table 2 Age and Sex wise Distribution of Persons Attending ICTC Centre (Tested and Seropositive)

Age group (Years)	Total no of persons tested			HIV sero-positive persons undergone 3 tests		
	Male	Female	Total	Male	Female	Total
<19	252	176	428	2	1	3
20-29	1051	731	1782	6	3	9
30-39	1476	1254	2730	9	4	12
40-49	685	465	1150	1	2	3
+50	231	182	413	1	0	1

Table 3 Distribution of positive cases according to Occupation

Occupation	Total Number	Percentage Prevalence
Service	6	21.42%
House-wife	8	28.57%
Driver	3	10.71%
Laborer	6	21.42%
Defense	5	17.85%
Total	28	100%

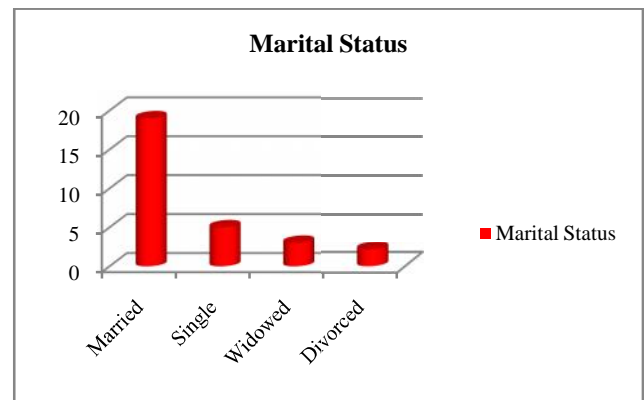


Figure 1 Depicting the correlation between HIV positive individuals and their marital status

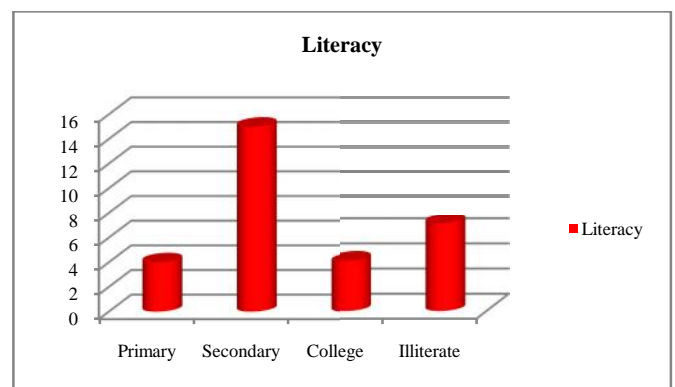


Figure 2 Depicting the correlation between the HIV positive individuals and their educational status

DISCUSSION

In recent years a number of countries including India with generalized epidemics have observed a decline in HIV prevalence due to improvement in National AIDS Control Programme. [6] The NACO annual report of 2015-16 states that overall, India’s epidemic is slowing down, with a 32%

decline in new infections and a 54% decline in AIDS-related deaths between 2007 and 2015. [7]

The Integrated Counseling and Testing Centre (ICTC) is an entry point to care service that provides people with an opportunity to know and understand HIV serostatus in a confidential manner. The data generated at an ICTC can provide useful information to understand the key aspects of HIV epidemiology in a particular region.

In our study, we found a prevalence of 0.43% in persons attending ICTC. This was lower as compared to studies conducted by Bansal *et al* in Haryana (28%) [8], Mathur *et al* in Jaipur (12.35%) [9], Kiran in Ranchi (6.9%) [10], Ganju *et al* in Himachal Pradesh (5.57%) [11], Sherwal *et al* in Delhi (3.78%) [12] and Rout *et al* in Bihar (2.68%) [13]. The low prevalence in our study may be attributed to increased awareness about the disease; lesser stigma associated with it nowadays, expanded coverage and better available diagnostic facilities and IEC activities.

The adult HIV prevalence in India is declining from estimated level of 0.41% in 2000 through 0.36% in 2006 to 0.31% in 2009. Adult HIV prevalence at a national level has declined notably in many states, but variations still exist across the states. A decreasing trend is also evident in HIV prevalence among the young population of 15-24 years. The estimated number of new annual HIV infections has declined by more than 50% over the past decade. [14]

The case load shared by males (71.42%) in ICTC was more than that of females (28.57%). This is in concordance with studies conducted by Singh *et al* [15] and BL Sherwal *et al* [16]. The male preponderance may be due to the fact that more males are involved in overt sexual activities and also females are under reported because of the social stigma associated with the disease in existing Indian milieu.

In our study, prevalence of HIV infection was highest in the age group of 30-39 years followed by 20-29 years age group. Similar results were seen in studies conducted by Dash *et al* [17] and Kumari *et al* [18]. This age group is sexually most active and hence more prone for developing HIV and other sexually transmitted infections. Young adults on account of their occupation, stay away from their families and are at a high risk of acquiring infection.

Among the positive cases least number (10.34%) was those who had completed their college education. Findings were similar in study conducted by Susmitha KM *et al* [19]. It seems that education does provide some protection. Greater access to higher education could facilitate the spread of HIV awareness and increase the use of barrier contraceptives.

Furthermore, seropositivity was highest among the housewives, 28.57% followed by service class and laborers 21.42% indicated the penetration of HIV infection in the general population and most vulnerable group was among the females. In contrast to this study conducted by Devi SB *et al* [20] showed seropositivity more among the manual laborers, followed by truck drivers.

CONCLUSION

ICTC have proved to be a critical interface between the client and the public health system where any client can know about his or her HIV status in resource limited nations. The trend of HIV prevalence among the population of the remote Rajouri

district of Jammu and Kashmir UT was found to be declining irrespective of age, residence, and literacy, indicating the effectiveness of NACP – III interventional programs.

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