



HIV IN YOUTH, A 12-YEAR STUDY FROM A TERTIARY CARE HOSPITAL IN NORTHERN INDIA

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ABSTRACT

HIV is the largest pandemic the world has seen in the last three decades with India as the third most affected country. The most common mode of HIV transmission is the heterosexual route, and the youth is the most vulnerable population for acquiring HIV infection. We analyzed 12 years data of the clients visiting our ICTC and calculated the HIV-positivity in various age groups, especially the youth (15-24 years). In 2011, as per the National HIV sentinel surveillance, the prevalence of HIV infection in India was 0.27%, whereas the 2013 ICTC data in our hospital shows HIV-positivity among the total clients and the youth to be 7.4% and 6.3% respectively. Over the past 12 years, a persistently high HIV-positivity in our ICTC reveals lack of awareness about prevention of HIV/AIDS among youth and the whole population at large, thus stressing upon the need for implementation of more effective HIV prevention programs, especially among the youth.

KEY WORDS: HIV, AIDS, youth, HSS, ICTC.



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INTRODUCTION

HIV in India was first detected amongst female sex workers in Chennai in 1986¹. By the end of 1987, out of 52,907 who had been tested, around 135 people were found to be HIV positive and 14 had AIDS². Since then, HIV prevalence has increased drastically over the past two and a half decade^{3,4}. HIV prevalence (as per HIV Sentinel Surveillance data) in adults in the year 2007 was 0.34% (2.31 million)⁵ which declined to 0.27% (2.09 million) in the year 2011⁶. The most common mode of transmission of HIV infection in India is the heterosexual route which accounts for 87.4% of total HIV-positive cases⁷. According to NACO guidelines for testing at ICTCs in India,⁸ the HIV testing has been divided into five age groups (<15, 15-24, 25-34, 35-45, >45 years) and the first age group with the risk of acquiring HIV infection by heterosexual route is the younger population from 15 to 24 years. This age group mainly includes students studying in schools, the graduates, and postgraduates in professional and degree colleges, new appointees in multinational companies (MNC), child laborers, workers in the agricultural fields, commercial sex workers (CSW), intravenous drug users (IDU), children living in slums, etc. There is widespread ignorance even amongst 'educated' youth, due to absence of uniformly established sexual and reproductive health education in school system. This 'youth' age group is most vulnerable to HIV and other sexually transmitted infections (STIs) with their poor knowledge of these diseases, and more importantly, due to their newly acquired freedom and independence due to lack of persistent parental check, and also the peer pressure influences them to indulge in various immoral sexual activities often in ways that can increase their risk of acquiring these

actions. According to the world health report (2003), of the over 60 million people who had been infected with HIV till 1999, about half became infected between the ages of 15 and 24 years. Today, nearly 12 million young people are living with HIV/AIDS. Young women are several times more likely than young men to be infected with HIV⁹. Therefore, to curtail the ever-spreading HIV infection in our country, it is essential to make the youth more aware about the HIV and other STDs by organizing lectures, seminars, panel discussions regarding various aspects of HIV and other STDs. Therefore, the current study was undertaken with a primary aim of analyzing the trend of HIV infection among the youth in our region. But, with some alarming results while evaluating the data, we were inclined to compare our ICTC data with the prevalence of HIV infection assessed by sentinel surveillance program, and in turn assess the effectiveness of various awareness programs for HIV/AIDS in region.

MATERIALS AND METHODS

The HIV data of the voluntary clients in the age group of 15 – 24 years visiting the Integrated Counseling and Testing Center (ICTC) in the department of Microbiology at Postgraduate Institute of Medical Sciences, (PGIMS) Rohtak was compiled and evaluated to know the trend of HIV infection among youth in northern state of India, Haryana, over the past 12 years (2002 – 2013). The HIV testing kits used for testing the clients in ICTC were supplied by National AIDS Control Organization through Haryana AIDS Control Society

RESULTS

Table 1
Year-wise distribution of all clients and youth tested at ICTC, PGIMS, Rohtak

Year	Total (TT)	TP	Youth (YT)	YP	TP/TT	YP/TP	YP/YT
2002	5962	301	1036	44	5.0	14.6	4.2
2003	4561	312	792	47	6.8	15.1	5.9
2004	6418	464	1063	58	7.2	12.5	5.4
2005	6328	464	1103	71	7.3	15.3	6.4
2006	8992	844	1911	117	9.4	13.8	6.1
2007	12543	1162	2658	149	9.2	12.8	5.6
2008	13418	1181	2976	150	8.8	12.7	6.0
2009	11581	1604	2383	210	13.8	13.1	8.8
2010	13731	1438	2798	194	10.4	13.5	6.9
2011	16201	1460	2914	161	9.0	11.0	5.5
2012	20017	1428	3048	187	7.1	13.1	6.1
2013	21254	1572	3777	238	7.4	15.2	6.3
Total	141006	12230	26459	1626	8.6	13.3	6.1

TT: Total clients tested; YT: Total youth tested; TP: Total HIV-positive; YP: Total youth HIV-positive

Over the period of 12 years from 2002 to 2013, a total of 141006 clients and 12230 youth clients visited our ICTC, out of which 12230 of total clients and 1626 of youth were HIV-positive. All the HIV-positive youth clients acquired the infection by unsafe sexual practice. The number of total clients and youth

visiting the ICTC has increased by more than three times, from 5962 to 21,254 and 1036 to 3777 respectively. The HIV positivity among total clients and youth has increased by more than five times from 301 to 1572 and 44 to 238 respectively (Table 1).

Figure 1
Year-wise prevalence of HIV positivity among total clients visiting ICTC from 2002-2013

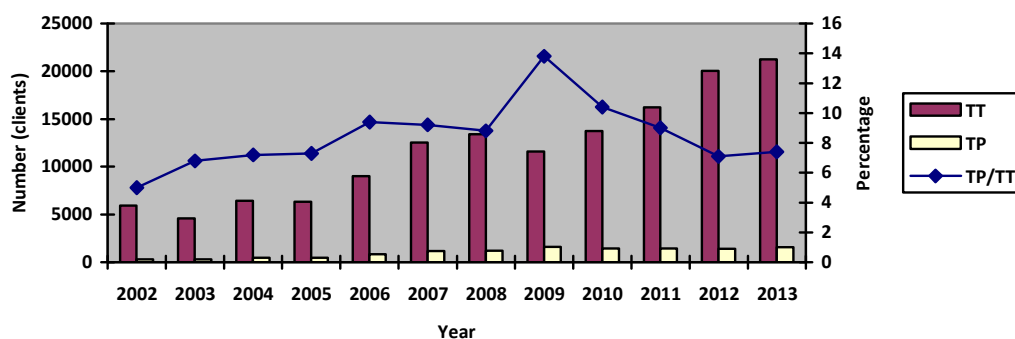


Figure 1 and Table 1 depict the prevalence of HIV positivity among the total clients visiting the ICTC. The overall HIV positivity among total clients was 5.04% in 2002, which peaked to 13.8 in 2009 and then fell down to 7.4% in 2013.

Figure 2
Year wise prevalence of HIV positivity among Youth from 2002 to 2013

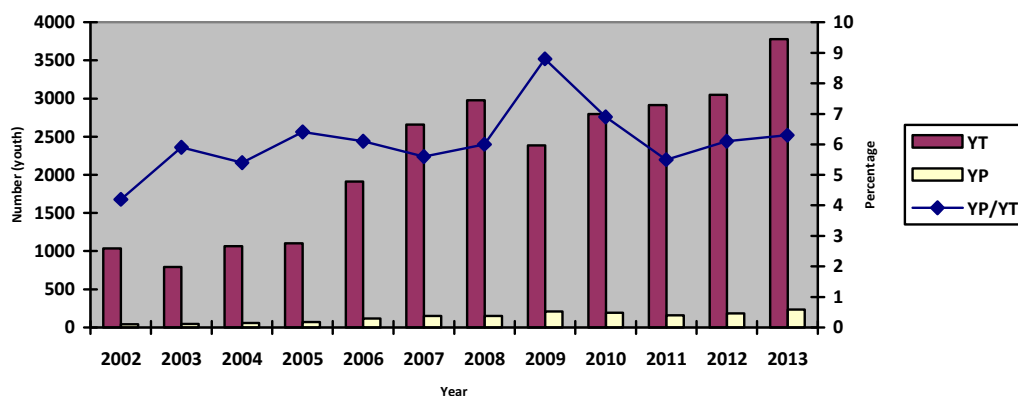


Figure 2 and Table 1 show that the HIV positivity among youth increased by 2% over the last 12 years, from 4.2% to 6.3% (highest being in the year 2009, when it rose to 8.8%). The HIV positivity among youth out of all the HIV-positive clients has more or less remained at around 15% over the past 12 years (Table 1). The male to female ratio has been around 2:1 in all the years.

DISCUSSION

As is evident from Table 1 and Fig. 1, there has been a tremendous increase in the number of total number of clients including youth visiting the ICTC for HIV testing over the last one decade. But, the concerning point is the rise in both the HIV-positivity among all the clients (from 5.04% in 2002 to 7.4% in 2013), and the HIV-positivity among youth (from 4.2% in 2002 to 6.3% in 2013) (Fig 1 & 2). The above observations reveal that even though there has been a considerable awareness among the society about the Integrated Counseling and Testing Centre (ICTC) for HIV testing, however, the effectiveness of various HIV Prevention and Control Programs among the general population is still poor, as seen by a higher prevalence of HIV positivity among total clients and youth. Similar findings have been shown in other studies conducted in various other parts of the country where the youth is found to be poorly knowledgeable and less aware about the HIV/AIDS and its prevention programs¹⁰. Such a high HIV-positivity in ICTC of our tertiary care centre, which may also be true for various ICTCs across the country, clearly questions the authenticity of the claims of HSS programs for calculating HIV prevalence among adults in the country. Even though, it is statistically not possible to compare the HSS data with our ICTC data, but when the difference is so huge (in 2011,

as per HSS, HIV-positivity was 0.27%⁶ and our ICTC data shows it to be 7.4%), then there is an urgent need to make some significant strategic changes in estimating the HIV-positivity among general population.

CONCLUSION

The present study was conducted to evaluate the trend of HIV-infection among youth, as this age group is the first and most vulnerable for indulging in immoral sexual activities. Even though this age group accounts only for 14-15% of total HIV-positivity, and the succeeding age group shows highest HIV-positivity, seeing the course of HIV infection, in which the diagnosis is made several years after acquisition of infection, it is possible that a person may have acquired infection in its youth and got it diagnosed in its late 20s or early 30s. Therefore, this age group has a huge influence on the HIV prevalence in the subsequent age groups, and if acquisition of HIV infection can be controlled in this age group, it will have a down regulating effect on the successive age groups. Also, the increasing HIV-positivity among all the clients and constant high HIV-positivity among youth over the past decade expose the lack of effectiveness of HIV awareness programs among youth. There is an urgent need to

implement regular and effective HIV prevention awareness programs in schools, colleges, multi-national companies, governmental institutions, high-risk groups, etc. Also, HIV/STD centers need to be established at schools, colleges, brothels, truckers unions, highway restaurants, bus depots, etc with counseling facilities, referral services, and where short street plays and lectures about HIV must be conducted for imparting awareness in a more effective way. Many more similar steps need to be taken to curtail the ever-spreading HIV infection in India. Finally, as discussed earlier, there is a hard-pressed need to implement newer strategies incorporating ICTC data for

estimating HIV prevalence in the country, rather than being contented with the low prevalence estimates calculated by HIV Sentinel Surveillance programs.

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