



Prevalence and Profile of HIV positive among attendees of Integrated Counselling & Testing Centre (ICTC) of a Govt. Medical College of Central India

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Abstract

An integrated counseling and testing center is a place where a person is counseled and tested for HIV, on his own free will or as advised by a medical provider. ICTC data can guide in identifying the various risk groups for priority targeted interventions to reduce HIV transmission in the community.

Objectives: *To study the Prevalence, risk behavior, and socio-demographic characteristics of attendees who tested HIV positive at ICTC and prevalence of TB-HIV co-infection among HIV positive cases.*

Material & Methods: *This study is based on the Record review & Inter-viewing of Patients attending ICTC in Shyam Shah Medical College Rewa, From 1st January to 30th December 2015. Instat Graph pad Statistical software was used for data analysis.*

Results: *The brief details of Clients attending ICTC are reflected here. Among the total patients 10089 in a year 2015, referred to ICTC, 167 were HIV Positive, so the overall prevalence of HIV among attendees was 1.65%, in*

which 93 were males and 73 were females, and 1 was Transgender. TB-HIV co-infection was present in 18 patients out of 597 were referred to RNTCP centre, out of total 18 ANC cases were referred to ICTC, 8 were found HIV positive. And most common 92.21% mode of transmission was heterosexual.

Conclusions: On the basis of present study we concluded that heterosexual mode of Transmission & Lower Socio – economic Status, lower educated, farmer by occupation predominate among HIV Positives, so we need to focus on these group by IEC or BCC activities to modify the risk behavior to reverse the HIV epidemic.

Keywords: ICTC, Medical College, Prevalence, Lower Socio – Economic Status.etc.

Introduction

HIV/AIDS recognized as an emerging disease in the early 1980s, HIV/AIDS has rapidly established itself throughout the world, and is likely to persist well in to the 21st century. AIDS has evolved from a mysterious illness to a global pandemic which has infected tens of millions people. The key indicator of HIV epidemic in 2012 The no. of people living with HIV 35.2 million, The No. of newly infected people with HIV is 2.3 million ,The no. of people dying with AIDS related causes 1.6 million^[1,2]. Percentage of pregnant women tested for HIV is 40%,and coverage of anti-retroviral medicine for prevention of mother to child transmission is 67%.^[3] WHO and UNAIDS define the different types of HIV epidemics as Low level HIV epidemic-HIV prevalence as not consistently exceeded 5% in any defined sub-population, Concentrated HIV epidemics-HIV prevalence is consistently over 5% in at least one defined population but it is below 1% in pregnant women in urban area, Generalized HIV epidemic-HIV prevalence consistently over 1% in pregnant women^[4]

In 2013, WHO issued revised treatment guidelines recommending earlier initiations of antiretroviral therapy at CD4 count of <500 cells/mm³.^[5] In India 1986 first known case of HIV was diagnosed amongst female sex worker in Chennai^[6] to control the spread of it the GOI setup NACP in 1987, its first phase in 1992 ,in 1999 second phase are launched and in 2007 the third phase NACP-III are launched targeted the high risk group ,conducted outreach programmes, and also provide welfare services to the affected, The NACP –IV phase launched for five years (2012-17).^[6] Phase –IV include Prevention services ,Care ,Support and treatment services^[7] but now

the epidemic shift from highest risk group (Commercial sex workers, homosexual men, drug user) to bridge population (client of sex worker, STD patients, partners of drug users) and then to general population. There is a time lag of 2-3 year between the shift from one group to the another.^[8]Provisional estimate for the year 2012 show that there were 20.89 lakh people living with HIV/AIDS. Information are collected from people who are tested HIV positive at ICTC in 2011-12 shows that 88.2% HIV infection are still occurring from heterosexual route of transmission followed by parent to child is 5%,injecting drug using are 1.7%,homosexual is 1.5%,unknown cause is 2.7% and least one by blood and blood product is 1%.^[9] Prevalence of HIV in India according to 2010-11 data most common in Transgender 8.82%, followed by IDU 7.14%, MSM 4.43%, FSW 2.67%,Truckers 2.29%,Migrants 0.99%least one in ANC 0.35% in 2012-13. ^[10] ,now none of the states showing HIV prevalence of 1% or more in India. The first case of HIV/AIDS was detected in MP in 1988, and since then the number of Aids cases is rising. In view of the seriousness of the problem, MP Government constituted AIDS control cell in 1992 under medical education department. Subsequently MP state AIDS control society was constituted on 14/7/1998.In Madhya Pradesh According to NACO report 2007 Aids prevalence in STD clinic 1.72% and in Female sex worker is 0.67%. ^[11] The number of AIDS patients has shot up from 4577 in 2010 to 4755 in 2011, in M.P. Indore remained the city with most number of AIDS cases is 907,followed by Bhopal 461,Jabalpur with 431 and Gwalior reporting 339 cases and the case load in Rewa was 301.

An integrated counseling and testing center is a place where a person is counseled and tested for

HIV, on his own free will or as advised by a medical provider. The main functions of an ICTC include: Early detection of HIV, Provision of basic information on modes of transmission and prevention of HIV/AIDS for promoting behavioral change and reducing vulnerability and linking PLHIV with other HIV prevention, care and treatment services.

The justification for such a center is the need for providing medical care to prevent HIV transmission from infected pregnant women to their infants. As TB is the most common co-infection in people with HIV, availability of HIV counselling and testing can help patients to diagnose their status for accessing early treatment^[13] HIV is the most powerful risk factor for progression from M. tuberculosis infection to TB disease. Then by keeping in mind the objective of study like to study the Prevalence of HIV /AIDS, risk behavior, and socio-demographic characteristics of attendees who tested HIV positive at ICTC, TB-HIV Co-infection, this study was conducted in ICTC of Shyam Shah Medical College Rewa M.P.

Materials and Methodology

This was a cross sectional study was carried out in an ICTC center, which is attached to the Microbiology department of Shyam Shah medical college Rewa located at central India. After taking the approval from ethical committees, as this institute is the tertiary hospital in this region, the informations were gathered from the attendees of this center that may throw light on the epidemiology of HIV transmission in this area. The study included the entire clients who attended the ICTC center during the year 2015 from 1st January to 31st December 2015 who were either voluntarily or being referred from various department of this institute. The various information was collected on a pre-designed and pretested proforma by the investigator herself with

counsellor who interviewed the attendees under strict confidentiality. So the total sample size was 10089.

As per NACO guideline after getting consent from the attendees, their blood sample was tested by Rapid test kit (first test). The serum sample showing the positive test result was subjected to a Trispot and Triline test (second test). Those sample showing positive test result in the second test were declared HIV positive, and the person showing negative test result were advised to come after one month for review. Variables used were age, sex, marital status, educational status and occupation, place of residence and pattern of risk behavior in relation to HIV/AIDS, HIV-TB CO-infection.etc. During the study period of 1st January to 31st December 2015. STATISTICAL ANALYSIS: Data was expressed as frequency & percentage, Statistical test includes simple analysis, probability & chi – square test by using Instat Graph Pad software.

Results

In the present study we found that total 10089 clients were undergo HIV examination at ICTC situated in the Microbiology Department of Shyam Shah Medical College Rewa central India. Out of whom 6646 (65.87%) were males and 3442 (34.11%) were females, and 1 was Transgender, and 18 were ANC, out of them 93(1.39%) males were positive, 73(2.12%) females were positive and 1(100%) Transgender was positive to HIV test. In other hand 8 ANC cases were positive out of total 18 referred ANC cases . so the overall HIV prevalence among all attendees was found 1.65% and HIV positive rate among referred ANC was found 44.4 % and prevalence of HIV-TB co-infection was found 10.77%(18 positive TB co infection among 167 HIV positive cases.).The prevalence in the pediatric age group (0-14 year) was 0.70%. (7 positive out of 991As shown in Table No-1-2

Table No-1 Month wise distribution of Attendees-

Month	M	F	TG	Total	Positive				Total ANC	ANC Positive	ICTC to RNTCP	RNTCP to ICTC	TB-HIV Co-infection
					M	F	TG	Total					
January	637	285	00	922	6	6	00	12	00	00	13	00	1
February	515	280	00	796	9	7	00	16	00	00	19	00	2
March	493	250	01	744	15	14	01	29	2	1	36	00	1
April	516	225	00	741	5	9	00	14	00	00	24	00	1
May	592	219	00	811	8	7	00	15	1	1	26	00	1
June	572	243	00	815	15	5	00	20	3	1	37	00	4
July	594	255	00	849	7	4	00	11	00	00	54	00	1
August	537	294	00	831	5	5	00	10	9	2	79	00	1
September	645	269	00	914	7	3	00	10	1	1	80	00	2
October	518	363	00	881	5	3	00	8	1	1	77	00	1
November	546	314	00	860	4	1	00	5	00	00	70	1	2
December	481	445	00	926	8	9	00	17	1	1	82	00	1
Total=	6646	3442	1	10089	93	73	1	167	18	8	597	1	17

M=Male, F= Females, TG=Transgender, ANC=Anti-Natal Cases.

Table 2- HIV sero-status and socio-demographic profiles of attendees-

S.N.	socio-demographic Profiles	Male attendant		Female Attendant		Transgender (TG)		Total attendees
		Positive	Negative	Positive	Negative	Positive	Negative	
	Age group (Years)							
1.	< 14	4	747	3	237	00	00	991
2.	15-24	10	1131	7	646	00	00	1794
3.	25-34	28	1513	21	1001	00	00	2563
4.	35-49	39	1935	34	967	01	00	2976
5.	>50	12	1227	8	518	00	00	1765
Total Positive=167		93	6552	73	3369	01	00	10089

We observe that there was significant difference in the age group wise distribution of total positive negative cases, because chi square =26.79, p=0.0001, it was <0.05. But when we consider only male we found that there was also significant difference in the positive –negative distribution according to age group because p=0.0053, and only in females it was also significant but less than male, p=0.0107.

Majority of client visit ICTC were belong to 15-49 year age group these were the reproductive age of peoples, least were belong to terminal age group either less than 15 year or greater than 50

years age group, HIV prevalence was more common in married person 45.50% and in lower or middle educated person around 85% cases, and less common among higher educated person around 15%, and relation with occupation we found that HIV was more common in unskilled worker 29.34% and in farmer 34.13 % and in housewife were 16.16% and it was least common among service man or businessman. HIV infection was more common in urban area it was 55.08% and in rural area it was 44.92. As shown in Table No-2-3

Table No.3 socio-demographic Profiles of HIV Positive patients-

S.N.	socio-demographic Profiles	Positive (n=167)	HIV Prevalence (%)
1.	Marital Status		
	Married	76	45.50
	Un-Married	57	34.13
	Divorced/Widow/Widower	34	20.35
2.	Education level		
	Illiterate	23	13.77
	Primary status	53	31.73
	Secondary status	69	41.31
	Higher Secondary	19	11.37
	Graduate and Above	3	1.79

3.	Occupation		
	Unskilled Worker	49	29.34
	Skilled worker	14	8.38
	Farmer	57	34.13
	Driver	6	3.59
	Service man (Govt/Private)	1	0.59
	Businessman	1	0.59
	Housewife	27	16.16
	Student	5	2.99
	Unemployed	7	4.19
4.	Residential area		
	Urban	92	55.08
	Rural	75	44.92

In the present study we found that the out total 167 positive cases of HIV the most common 92.21% mode of HIV transmission was hetrosexual followed by parenteral route of transmission 4.19% ,Homosexual 1.79% then by

blood transfusion or blood product was 1.19%and least common mode of transmission by infected syringe was 0.59% of the cases. As shown in Table No-4

Table No.4 Mode of spread of HIV

S.N.	Common Mode of spread	Male	Female	TG	Total (N=167)
1.	Hetro-sexual	86	68	00	154(92.21%)
2.	Homosexual	2	00	01	3(1.79%)
3.	Blood Transfussion/Blood product	1	1	00	2(1.19%)
4.	Infected syringe	1	00	00	1(0.59%)
5.	Parent to Child	3	4	00	7(4.19%)
Total=	N=167	93	73	01	167(100%)

TG- Trans Gender,

There was a highly significant difference in the mode of transmission between male, female and transgender because chi-square = 57.4, $p < 0.0001$ it was les,0.05,but we observe there was no

significant difference in the various mode of transmission between males and females because , $p = 0.5783$, it was > 0.05 .

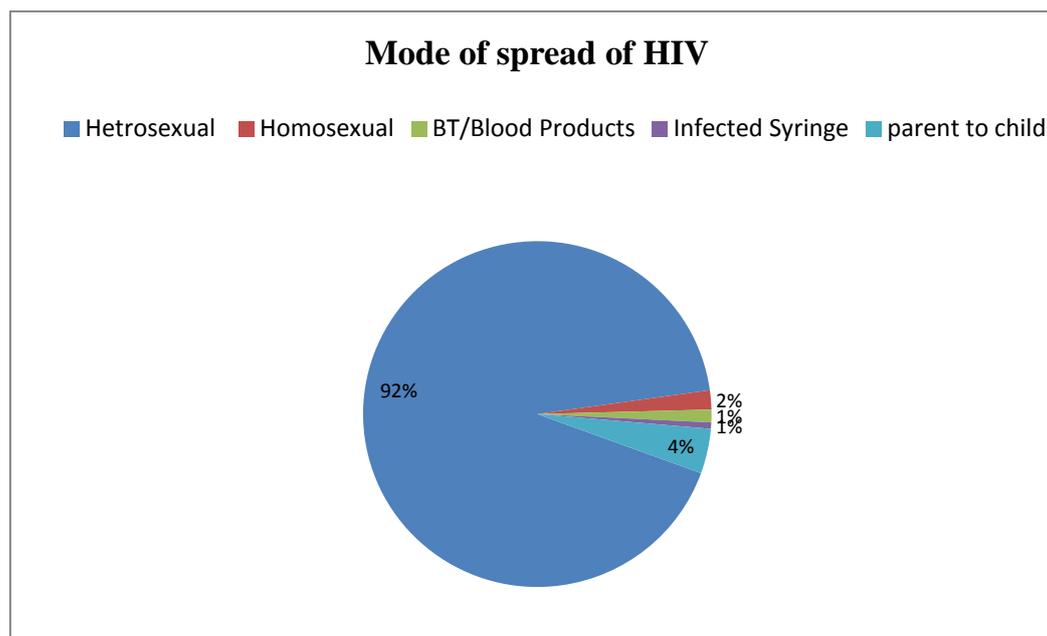


Figure- 1

Discussion

ICTC services provides to those who come to the center either from referral (care providers and NGOs) or direct walk in clients. So the profile of attendees depends upon the characteristics of the catchment areas and the population residing therein. The subpopulations which are vulnerable or practice high risk behavior (HRB) shall be the target group for these services. The ICTC general is an ideal point for prevention, where HIV negative individuals learn to use full array of existing services and interventions to adopt and maintain risk reduction behaviors, and HIV positive individuals use quality prevention services to adopt and sustain lifelong protective behaviors and avoid the virus transmission.

In the present study we found that the overall prevalence of HIV among ICTC attendees was noted to be 1.65%, and HIV positive rate among referred ANC was found 44.4 % .In case of Sex wise distribution of HIV positive cases; 55.68% were male and 43.71% were females and 0.59% was Transgender, similarly a study conducted by Shashikala Manjunatha^[14] et.al (2014) in Bangalore found that the prevalence was 1.3% and in ANC it was 0.08%, and 52% were male and 48% were females in HIV positive cases but contrast to this prevalence was much higher in a study conducted in Udupi, southern Karnataka (9.6%) in 2007^[15] and also from study in Ahmedabad (4.8%)^[16]. we found 45.50% patients were married who were HIV positive similarly a study conducted by Vyas^[17] et al. (2009), Gupta (2009)^[18] and Jayaram^[19] et al.(2009) noted that majority of the attendees of both sexes were married, which was support the findings of the present study, In the present study, 45.5% of the sero-positives were illiterate or primary educated while Jayaram^[19] et al (2009) found 2.6 and 3.0% in 2005 and 2006 illiterate sero-positive, respectively. This is quite less the findings of the present study it may because educated persons were became aware to the mode of transmission and how to prevent themselves from these.

In the present study, 55.08 and 44.92% of the seropositive belong to urban and rural areas, respectively. The difference was statistically significant. Similarly a study done by T Sinha^[20] et al.(2013) found a similar finding ,urban client were 55.56% and rural were 44.44% to support the present study. It showed that (a) people residing in urban areas were more engaged in high risk behavior; (b) there are more testing facilities in urban areas and (c) IEC activities are more concentrated in urban areas. In future planning of IEC, we have to take into consideration the aforementioned findings. We found that in the finding of the study majority 37.72% of the participant were unskilled or skilled laborer followed by farmer 34.13% then housewife were 16.16% and least common occupation were businessman or government employed, similarly a study conducted by T Sinha (20)et al.(2013) support the present study.

In the present study that the heterosexual behavior was noted as the most common mode of transmission of HIV/AIDS, which is again in conformity with the findings of the study conducted by Lal^[21] (2003) and Vyas^[17] et al. (2009).

Conclusion

The overall prevalence of HIV positive cases among one year data of attendees was found 1.65% and the HIV positive rate among referred ANC was found 44.4 % so this can be definitely considered as low prevalence but still need HIV awareness campaigns to be exaggerated because the prevalence were increases continuously since 2010. Case load sharing for females was very low. Hence females must be educated in the community. Prevalence of HIV was very high among sexually active age group. Hence when conducting outreach sessions of HIV awareness in the community, it should be kept in mind that 15-49 years age group must attend the sessions. Higher education was found to be a protective factor for HIV, as education can help enhance the condom use rate. Hence people should be

motivated to have education at least above 10th Standard and health education regarding HIV/AIDS should be included in the Secondary schools. We also found that the ANC cases were increases so mother to child transmission was also increases so we need to focus on PPMTCT activities to reduce childhood HIV positive cases. We need increased collaboration between DOTS and ICTCs is important because of the extremely high crossover between TB and HIV and more cases were found co-infected.

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Conflict of Interest: None declared

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