Clinical Profile of HIV/Aids Patients in Srinagar, Kashmir, India

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Abstract

Background: Since the inception of the integrated counseling and testing centre (ICTC) at government medical college (GMC) and associated hospitals, there was no previous study on the clinical experiences in HIV/Aids positive cases in this institution.

Objectives: The aim of this study was to delineate the epidemiological profile of HIV/Aids seropositive cases and which included to study:

- Number of HIV seropositive patients from april 2002 to december 2009.
- Common signs and symptoms of HIV/Aids seropositive patients.
- Age and sex distribution of all seropositive cases.
- Mode of transmission of HIV infection.
- Residence and profession profile of seropositive cases.
- Different types of opportunistic infections in these patients.

Study design: The present study is documental and analytical descriptive and it was conducted at the government medical college and associated hospitals through data collection of 128 records of individual who tested positive for HIV by three rapid test methods using three different antigens at integrated counseling and testing centre (ICTC). Demographic variables such as age, sex and occupation, data on mode of transmission and clinical manifestation were examined together.

Results: A total of 128 patients had tested positive for HIV by at least three tests using three different antigens, which included 112(87.5%) male and 16(12.5%) females. The mean age of these patients were 34.45±8.40 with male to female ratio of 7:1.The peak incidence was found in the age group of 30-39yrs (36.8%). Majority of HIV positive patients belonged to security personnel's followed by migrant labourers and housewives.
Transmission of infection was through sexual contact in 90.7 % followed by homosexual transmission in 4.7 %. Vertical transmission and blood transfusion accounted in 2.3% cases each. 78.9 % of patients presented with fever of > 1 month duration, 35.1 % with weight loss and 33.5

% with diarrhea. Tuberculosis and candidiasis were common opportunistic infection followed herpes zoster and varicella.

Conclusion: This study highlights the burden of HIV/Aids patients in the study place. The results will be useful for various programmes in health promotions in patients of HIV/Aids from this region.

Keywords: clinical profile, HIV/Aids seropositive cases, opportunistic infections.

Introduction

India as a country that is populous, large, and culturally complex and economically diverse will agree that HIV adds to its woes.[1] All countries in the southeast Asia are deeply concerned regarding the HIV epidemic and responding their best. Some organization such as UNAIDS, WHO and Naco estimate national adult prevalence in India as 0.36% amounting to 2.7 million (2-3.1million) HIV positive people, which account for 10% and 65% of the HIV burden of the world and southeast Asia respectively.[2]

Voluntary counseling and testing for HIV is a cost-effective intervention in preventing the spread of HIV transmission and is an integral part of HIV prevention program, which provides an opportunity to learn and accept the HIV status in a comfortable, convenient and confidential manner. Integrated counseling and testing centre (ICTC) network is the first interface between a person willing to get tested and the public health system. Furthermore, it is an entry point to care.[2]

Various studies from India and outside have suggested varied clinical profile and associated infections in HIV patients.[3] Hence, there is a need to define disease aspects in terms of various socio-demographic and epidemiological characteristics.[2] This information will be useful in planning the local interventions for preparing the local action plan and implementing the information, education and communication and behavior change communication.

Srinagar is the largest city of the J&K state (Jammu and Kashmir) with population crossing over 1million has been placed in low prevalence state[1], but still it is at a high risk due to presence of more than five lacs security personnel, tourists, religious pilgrimages and migrant population coming for work from other parts of country. The specific objective of this study is to find out clinical profile as well as the demographic and epidemiological characteristics of attendees whose samples were seropositive for HIV/Aids.

Materials and Methods

Study type: Observational

Study setting: Government medical college and associated hospitals.

Study population: all patients who tested positive for HIV through integrated counseling and testing centre (ICTC) of government medical college associated hospitals were included in this review.

Eligibility criteria include:

Gender: both
Accepts healthy volunteers: No
Sampling method: Non-probability sample

Data collection

Electronic medical records from patients who tested positive for HIV between April 2002 to December 2009 at ICTC, GMC associated hospital were reviewed. Demographic variables such as age, sex and occupation, data on mode of transmission and clinical manifestation were examined together. Those patients with incomplete records and already diagnosed for HIV at other centres were excluded from the study.

Statistical analysis

The statistical analysis of the data was done by using test statistic Qui square and Fisher's Exact test. These tests were two sided and were referenced for p-values for their significance. Any p-value less that 0.05% i.e. ($p < 0.05$) was taken statistically significant

Results

In the year 2002-03 only 11 seropositive patients were detected which gradually increased in number over the years as shown in figure 1.The total of HIV/Aids seropositive cases was 128 with cumulative incidence rate of 0.8% over a period of eight years (from April 2002 to December 2009). Among these seropositive patients, 87.5% (112/128) were males while 12.5% (16/128) were females. All the females affected had seropositive living or expired partner.

The majority of patients were in age group 30-39yrs (36.8%) while the minimum numbers of patients were from age group less than 20yrs and greater than 50yrs (Table 1a). The male female ratio was 7:1. Among both male and female seropositive patients, 92.1% (118/128) were married and rest7.9% were unmarried (Table 1b). 64.1% (82/128) among seropositive patients were from non-local population while the rest 35.5% (46/128) were from local population which was statistically significant (Table 1c). Eleven patients had died from the complications of the disease

comprising of one homosexual, three females and rest were males with cumulative fatality of 8.6%.

The major group of HIV/Aids seropositive patients were from security personnel which accounted for 54.7% of cases.15.6% cases were labourers while housewives comprised of 10.2% cases and businessman group constituted 7.8% of cases. Tourist guides, drivers and students accounted for 2.4% cases each while farmers and fruit growers comprised of 1.5% cases each (Table 2).

The commonest mode of transmission was heterosexual route (91.5%); homosexual mode accounted for 4.7% of cases while blood transfusion and vertical transmission comprised 2.4% cases each. No case of drug users or use of infected syringes or needles was reported (Table 3).

In clinical presentation fever was present in highest number of cases (98.9%) followed by diarrhea (33.5%) and weight loss (35.1%). 7% of case were asymptomatic. Tuberculosis was associated with 3.2% of cases while lymphadenopathy was found in 7.8% of cases. Cutaneous manifestations were associated with candidiasis (3.1%), herpeszoster (1.5%) and varicella (0.78%). Only one patient had a history of bleeding PR (Table 4).

Discussion

In the present study cumulative total of HIV positive cases was 128 with cumulative incidence rate of approximately 0.8% over a period of almost 8 yrs which is higher when compared with prevalence of 0.28% based on national family heath survey-3.[6] A similar pattern of finding was observed in a study in philippine[7] where cumulative incidence rate over a period of more than 8 yrs was on higher side when compared to national prevalence. In the year 2007-08 as seen in Figure 1, an apparent peak in number of seropositive patients was mostly due to awareness program conducted in high-risk groups and male having sex with male (MSM) group of the population.

The male seropositive constituted 87.5% while the remaining 12.5% were females, with male to female ratio of 7:1. Our study finding matched with study done by Khopkar et al[8] which showed similar male female ratio of 7:1. It was observed that although male out-numbered females but still it is alarming that females were at high risk due to high risk behavior of males. There were other studies conducted in and outside India[9-13], in which male out-numbered females but with lesser male female ratio which could be explained by the fact that these studies were carried in major cities and towns with different socio-economic and cultural background than our place of study.

The maximum patients were in the age group 20-49yrs (95.7%) with peak age of 30-39yrs (36.7%) in males and 20-29yrs (50%) in females which is economically productive age group of

a population or a community. The study done in Philippine general hospital[7]reported similar finding of 89% of HIV/Aids occurring in 19-49yrs old population with peak age in 30-39yrs for males and 20-29yrs for females which corroborated with our findings. The maximum among them were married (92.9%) while the remaining ones were unmarried and these findings matched with studies done before.[2,3,10,14]

In this study a major portion of seropositive patients (54.7%) were from security forces which was the main reason in recent surge in HIV incidence in the place of study done and our findings were supported by studies done in our state.[3,10] Another factor which added to this surge were labourers (15.6%),who were migrant labourers from Bihar state with high prevalence of HIV cases as were seen in different studies done with migrant populations.[10,15]

Also alarming in this study was that females comprising housewives (10.2%) belonged to age group 20-29yrs were among local population and this finding corroborated with report in study on HIV in India[1] that this infection is no longer restricted to sex workers or intravenous drug users (IVDU) or truck drivers. However, the infection has spread into general population and rates of infection are reported to be increasing among monogamous women through unprotected sex with infected partners.[1,2]

Heterosexual is the most common mode of transmission worldwide. As such in this study 91.5% of seropositive cases accounted for this commonest mode of transmission which is supported by various studies in India as well as other parts of world.[1,3,7-9,14] The homosexual mode of transmission of 4.1% was of concern in our place of setting as it can highlight spread from high risk to general population via bridge population and from permissive to conservative societies.

Khopkar et al[8] reported 6.7% of seropositive for HIV/Aids in homosexuals while Reshmi et al[2] reported 7.7% in MSM. Outside India, it is on higher side especially in African countries.[9] Blood transfusion and vertical transmission comprised of 2.3% each which was comparable to a perspective on the current status of HIV epidemic in India by Solomon et al.[1] Sircar et al[12] and Singh S et al[19] reported 12.1% and 5.7% seropositivity through blood transfusion while Chakarvarty et al[15] reported figure of almost 2.5% equal to our study .In our place of study, blood transfusion is given by kith and kin of a patient and no professional donors are used because of the awareness of HIV/Aids among general population. Also HIV testing of blood and blood products is done stringently to prevent spread through infected blood.

In a study done on HIV infected children in Chennai[21] India, the percentage of HIV positive children or vertical transmission was 4.4% while study done by Verma et al[3] and Zaheer et al[14] reported 3.95% and 4.2% vertical transmission respectively which is somewhere near to our finding of 2.3%. Among seropositive females, 50% belonged to 20-29yrs age group, which is sexually active group and as females and children were considered at back of aids epidemic in our place but from the statistics such is not the case as 50% seropositive females belonged to reproductive age group which is of grave concern to the society or community it belongs.

Fever, weight loss and diarrhea were the commonest symptoms seen in these patients and at least more than one of these symptoms were present in all the seropositive patients. These commonest symptoms finding matched with various studies done in India.[3,8,10,14,16-18] Fever in 78.9% seropositive cases being as commonest presenting feature is consistent with studies by Kothari et al (70%), Chakarvorty et al (70.6%), and Sharma (71%).[11,15,20] Weight loss was the second commonest presenting feature (35.1%) which is consistent with consistent with several studies.[8-12,14-15,20] Similarly, chronic diarrhea (35.5%) as third commonest presentation matched with studies done.[16,18]

In other features tuberculosis and candidiasis formed 3.1% of seropositive cases each as only four cases were reported to be infected with these two opportunistic infections. In our study these two infections were most common opportunistic infections which was comparable with several studies particularly in north india[1,22] and elsewhere.[1,3,10,12,14-15,17-18]

Conclusion

The disease as burden is supported by fact that majority of HIV seropositive cases were from reproductive age group with 50% of females among them of age group 20-29 yrs is likely to increase vertical transmission. The study was subjected to certain limitations as it is hospital base study which decreased its external validity.

Conflict of Interest: None declared.

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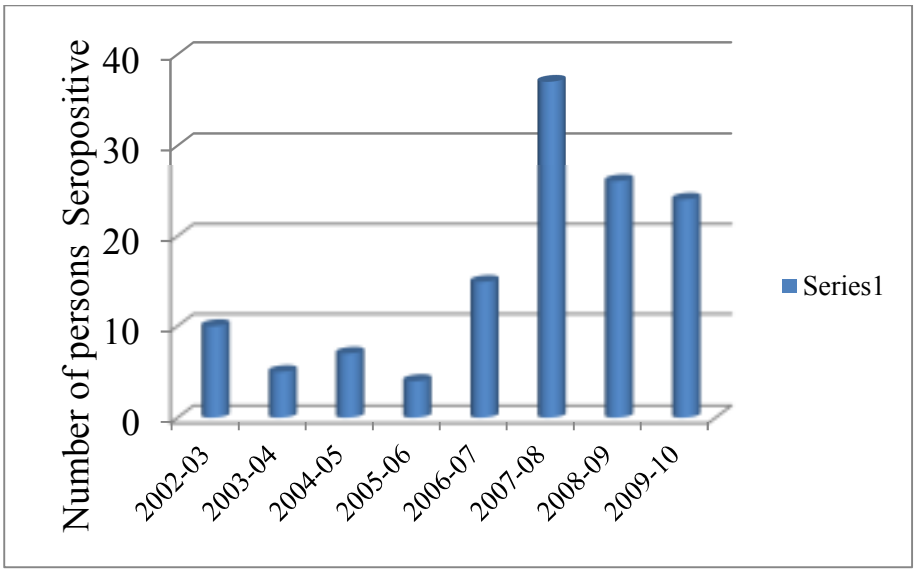

Figure 1: showing HIV Ab Seropositive by years(April 2002-December 2009). x-axes shows time period in years and y-axes denotes number of seropositive patients per year. year started from april 2oo2 to march 2003and likewise rest

Table 1a: Distribution of HIV/AIDS sero-positive patients by age and sex at government medical college hospital, April 2002 to December 2009

Age groups(in years)	Male(n=112)		Female(n=16)		Total(n=128)	
	N	%	N	%	N	%
<20yrs	3	2.6	0	0	3	2.2
20-29yrs	30	26.8	8	50	38	29.7
30-39yrs	41	36.7	6	37.5	47	36.8
40-49yrs	33	29.5	2	12.5	35	27.4
>50yrs	5	4.4	0	0	5	3.9
Total	112	100	16	100	128	100

p value (0.271) was statistically nonsignificant (NS).

Table 1b: The distribution of male and female seropositive cases who were married or unmarried whose statistical significance was not seen

Maritial status	Male	Female	Total(%)
Married	102	16	118(92.20)
Unmarried	10	0	10(7.80)

Table 1c: Distribution of male and female seropositve cases by residence status

Residence	Male	Female	Total(%)
Local residence	30	16	46(35.90)
Non- local	82	0	82(64.1)

p value was statistically significant and as such applied to the population.

Table 2: Distribution of 128 seropositive cases by different profession

Profession	No .of cases	% age
Security forces	70	54.7
Labourers	20	15.6
Housewives	13	10.2
Businessman	10	7.8
Touristguide	3	2.4
Drivers	3	2.4
Students	3	2.4
Farmers	2	1.5
Fruit growers	2	1.5
Others	2	1.5
Total	128	100

Table 3: different modes of transmission in seropositive patients

Mode of exposure	Males	Females	Total	(%age)
Heterosexual	100	16	116	(90.7)
Homosexual	6	0	06	(4.7)
Blood transfusion	3	0	03	(2.3)
Vertical	3	0	03	(2.3)
Syringes and Needles	0	0	00	(0.0)
Total	112	16	128	(100)

p value was statistically non-significant

Table 4: The clinical presentation of all seropositive cases
More than one presenting feature were present in the patients

Manifestations	No. of cases	% distribution
Fever >1 month	101	78.90
Weight loss	45	35.10
Diarrhoea	43	33.10
Lymphadenopathy	10	7.80
Asymptomatic	9	7.00
General weakness	7	5.40
Tuberculosis	4	3.10
Cadidiasis	4	3.10
Herpes zoster	2	1.50
Varicella	1	0.78
Bleeding PR	1	0.78