

## SCREENING OF HOSPITAL PATIENTS FOR HIV: AN EXPERIENCE TERTIARY CARE HOSPITAL OF BIDAR DISTRICT

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**ABSTRACT: OBJECTIVE:** The clinical consequences of HIV infection encompass a wide spectrum. The Early recognition of persons who have HIV will help in early interventions to halt or slow the progress of HIV disease and to extend fruitful lives. **METHODOLOGY:** This cross-sectional study was conducted among patient referred to the voluntary counseling and testing center (VCTC) from various departments in, BRIMS Teaching Hospital, Taluka Hospital, Humnabad, Taluka Hospital, Basavakalyan, Taluka Hospital Aurad and Taluka Hospital Bhalki, to find out the pattern of disease/ symptoms high risk behaviors (HRB) for HIV and HIV serostatus among the hospital patients. Following the guidelines prescribed by the National AIDS Control Organization (NACO) anonymous data were collected through interview from 500 individuals. Where a specific diagnosis of a disease was obtained mutually exclusive symptoms were considered for analysis. **RESULTS:** The major diseases/ symptoms observed among those patients were tuberculosis in 32.19%, STD in 29.97% prolonged explained fever in 19.41 of the patients. The overall rate of HIV seroreactivity was 17.44%. The HIV serostaus by diseases/ symptoms showed that 32.91% of patients with prolonged unexplained fever were HIV seroreactive; the rate was 12.90% among patients with skin diseases, 12.29% in STD and 12.21 in tuberculosis patients. Overall, 332 patients (66.34%) had HRD for HIA/ AIDS. The rate of HIV seroreactivity was more among patients who had HRB for HIV/ AIDS and who were referred from indoor departments (23.24%) compared to outdoor departments (13.65%). The patients suffering from prolonged unexplained fever need greater attention fro HIV screening. **CONCLUSION:** Early detection of HIV positive patients makes interventions possible at a very early stage and this can slow down/ block the progress of HIV disease and as a result can extend fruitful life.

**KEYWORDS:** Inpatients, Screening, HIV Virus, Prevalence.

**INTRODUCTION:** Recognized as an emerging disease only in the early 1980s, AIDS has established itself into a global pandemic. The number of people living with HIV continues to grow as does the number of deaths due to AIDS. The global estimate of epidemic suggests that in the year 2006 a total of 39.5 million people were living with HIV; a total of 4.3 million people were newly infected and 2.9million people died of AIDS as of December an estimated 5.2 million people are living with HIV in India.

The clinical consequences of HIV infections encompass a spectrum ranging from an acute syndrome associate with primary infection to a prolonged asymptomatic state to advance disease. The symptoms of HIV disease can occur at any time during the course of HIV infection. However, antiretroviral therapy (ART) has a major impact on blocking or slowing the progression of disease over an extended period of time and prolonging the life of severely ill patients.<sup>1,2</sup> In the developing countries like our, AIDS has imposed new demands on the health care systems.<sup>1</sup>

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Therefore, an early knowledge of HIV infection is highly beneficial in order to prolong fruitful life of the infected person and to prevent transmission of infection through lifestyle change, consistent condom use, adopting universal or specific protection and ART.

With this background knowledge, the present study was conducted among hospital patients who were referred to the voluntary counseling and testing center (VCTC) from various outpatient and inpatient department (OPD and IPD) in BRIMS Teaching Hospital to find out their disease symptom patterns (they were suffering from); their HIV serostatus and high risk behavior (HRB) for HIV/ AIDS.

**MATERIAL AND METHODS:** The present study was conducted in BRIMS Teaching Hospital. The study subjects were the patients who were referred from various outpatients as well inpatient departments of the hospital to the VCTC of the institution for counseling and screening of their HIV serostatus. Data collection was done during the period from Jan-2012 to Dec-2012. The clinical diagnosis (other than HIV serostatus) of the patients was already made in the respective department where they were referred from.

Where a specific diagnosis of a disease was obtained, it was analyzed as a mutually exclusive disease; and where specific diagnosis not obtained, mutually exclusive predominant symptom was considered for analysis. The patients grouped as tuberculosis were not considered under the group of fever or weakness and vice versa. However, some clinical conditions (a few in a each category) were grouped into a single miscellaneous group.

Anonymous information was collected on a predesigned and pretested schedule by interviewing the study subjects. Following the guidelines of the National AIDS Control Organization (NACO) <sup>3</sup> the interview was taken by the counselor of the VCTC under strict confidentiality. As per the policy and strategy prescribed by the NACO, after a pretest counselling of the study subjects and obtaining consent from them, their blood sample was collected and tested followed by post-test counseling.

The variables, studied were age, sex, marital status, education, occupation, place of residence, disease/ symptoms they were suffering from (at the time of visiting the hospital), previous history of HRB for HIV/AIDS and their HIV serostatus.

The collected data were compiled and analyzed using standard statistical methods. The anonymity of the study subjects was ensured and only aggregate data reported.

**OBSERVATIONS:** A total 500 patients were referred from various OPD and IPD of the hospital to the VCTC for counseling and testing from their HIV serostatus during the period from Jan-2012 to Dec-2012. Out of them, 394 (78.8%) were male and the rest 108 (21.62%) were female. By age, 9 (1.72%) were children under 10 years, 26 (5.16%) were adolescents (10-19% yes), 440 (87.96%) between 20 to 40 years and the rest 29 (5.16%) above 50 years.

By marital status, 290 (58%) were married, 200 (40%) unmarried and the rest 10(2%) were either widow/ widower or divorced/separated. By level of education, 140(28.00%) were illiterate; 166 (33.91%) had an education between class I to IV; 155(30.96%) between class V to class X; and the rest 36 (7.13%) of class XI and above.

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Regarding the diseases/ symptoms they were suffering from (at the time of their hospital visits), it was observed that 161(32.19%) of the patients had tuberculosis (98% pulmonary and 2 % bone); 150(29.97%) had sexually transmitted diseases (STD); 97(19.41%) had prolonged unexplained fever; 31(6.14%) had some overlapping miscellaneous symptoms/ diseases that included chest pain, mental confusion, swelling of lymph nodes, paralysis and jaundice.

The overall rate of HIV seroreactivity (seropositivity) among all the patients was 17.44%. The analysis of their clinical conceptions by HIV serostatus shows that out of 82 persons with prolonged unexplained fever 28(32.91%) were HIV seroreactive; the HIV seroreactivity rates were 12.21% among patients with tuberculosis. 12.29% among patients with the STD and 12.90% among patients with skin problems. The miscellaneous group compared patients with different types of diseases/ symptoms.

An overall 332 (66.34%) of the patients had previous or current history of HRB for HIV/ AIDS. Analysis of data by clinical conditions and HRB for HIV/ AIDS (like exposure to commercial sex workers, injecting drug use or receiving blood transfusion) was done. And it was observed that in each group of clinical condition those patients with a history of HRB for HIV/ AIDS had a higher proportion of HIV seroreactive (Table 2).

Table3 shows that the majority of patients, i.e., 306 (61.18%) were referred to the VCTC from various outpatient departments and the rest from various indoor department and the rest from various they were referred from shows that the proportion of seroreactives was higher among the indoor patients (23.42%) compared to outdoor patients (13.65%).

**DISCUSSION:** Tuberculosis is the most predominant opportunistic infections in people with HIV/ AIDS in our country, <sup>2</sup> and persons with tuberculosis are more frequently screened for HIV. So the observation that nearly one-third (32.19%) of the patients screened had tuberculosis (98% with pulmonary tuberculosis) was not expected. About another one-third (29.97%) of the patients referred for HIV testing had an STD. In our country, 85% of the HIV infection in transmitted through sexual route and unprotected multipartner sex are the most common cause of HIV infection<sup>2</sup>. most of the STD patients are clients of commercial sex workers, so they are at a very high risk of HIV. So patients with STD are screened frequently.<sup>3,4</sup> However, the highest rate of HIV seroreactive (32.91%) was observed among the patient with prolonged unexplained fever. This appears to be a major symptom among the HIV positives in the area with which they are presenting at the hospital settings.

No. of cases	Disease/ Symptoms they are, suffering from							Total
	Tuberculosis	STD	Prolonged unexplained fevers	Skin diseases	Unexplained weakness	Prolonged diarrhea	Miscellaneous	
<b>Total</b>	<b>161</b>	<b>150</b>	<b>97</b>	<b>38</b>	<b>18</b>	<b>6</b>	<b>30</b>	<b>500</b>
HIV Seroreactives	16 (12.21)	15 (12.29)	36 (32.91)	4 (12.90)	2 (14.28)	4 (80.00)	4 (16.00)	71 (17.44)

Patients were grouped into mutually exclusive clinical conditions. The patients grouped as tuberculosis were not considered under the group of fever or weakness and vice versa. The miscellaneous group comprised patients with chest pain, mental confusion, swelling of lymph nodes, paralysis, jaundice etc., figure in the parentheses denote percentages.

**Table 1: Distribution of Cases according to their Clinical Diagnosis (Disease/ Symptoms) and HIV Serostatus**

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No. of cases	Diseases/ Symptoms they are suffering from and HRB status (yes/no)													
	STD (n=150)		Tuberculosis (n=161)		Prolonged fever (n=97)		Skin diseases (n=38)		Unexplained weakness (n=18)		Prolonged diarrhea (n=6)		miscellaneous (n=30)	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	no
Total no of HIV	129	21	80	81	58	39	32	6	13	5	6	0	14	16
Positive case (%)	14 (13.3%)	1 (5.9%)	13 (20.0%)	3 (4.5%)	24 (50.0%)	2 (64%)	4 (15.4%)	0	2 (20.0%)	0	4 (80.0%)	0	4 (36.4%)	0
Z/P	Z=1.12	Z=2.78	Z=5.16											
	P>0.05	P<0.05	P<0.001											

**Table 2: Distribution of cases according to Disease/ Symptoms with history of High Risk Behaviors (HRB) for HIV and HIV serostatus**

Referred from	No. of cases	
	Total	HIV seroreactivity rate
Outdoor departments	306	68
Indoor departments	194	117

**Table 3: Distribution of Cases according to HIV Serostatus (n=500)**

The significant difference in HIV serostatus (among the patients with major groups of symptoms/ diseases) between patient with and without HRB for HIV were interesting. From the study appears that the likelihood of getting HIV seroreactive increases significantly among patients with unexplained prolonged fever, tuberculosis, etc., when they have had HRD for HIV/ AIDS.

Recently effective chemotherapeutic drugs have been developed for the treatment of HIV that suppresses the HIV infection itself. These drugs have been proved useful in prolonging life of severely ill HIV/ADS patients. With excellent suppression of HIV replication, the clinical course becomes stabilized or improve as a result of partial immunologic reconstitution.

The observations that continuous viral replication goes on during the early phase of HIV infection and considerable disease progression occurs with even low levels circulating virus, has led to the concept of treating the majority of infected individuals with ART even if the CD4 lymphocyte count is preserved.<sup>2</sup>

The VCTC is a key entry point for a range of interventions in HIV prevention and care like prevention of transmission from mother to child during birth, referrals for STD treatment, condom promotion, care and support for treatment of opportunistic infections, management of HIV -TB co-infections and more recently for referral to designated medical centers of ART.<sup>2</sup>

The study has revealed that when patients are attending hospitals or doctor's clinics with unexplained prolonged fever, or tuberculosis or prolonged diarrhea or unexplained weakness, it will be good practice on the part of the physicians to inquire about the history of HRB for HIV/ AIDS.

Moreover, counseling of those patients followed by HIV testing (following the guidelines of NACO) will go one step forward to diagnosing and treating the patients with appropriate drugs including antiretroviral chemotherapy. It is believed that ultimately this approach will help to diagnose HIV at an early stage and will help halt/ slow down the progression of infection and prolong fruitful life of persons (Patients) living with HIV.

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Patients attending hospitals with various problems may harbor HIV too. Early recognition of patients who have HIV will help in early intervention to halt or slow down the progress of HIV disease and to extend fruitful lives.

The BRIMS Teaching hospital, Bidar, the only tertiary care hospital in the Bidar District, is located close to the city of Aurad. The information gather from the patients attending various outpatient departments or admitted in various indoor departments of the hospital may throw light on the epidemiology of HIV/ AIDS in the region.

Although a prolonged fever for more than one month is of the major sings in the WHO case definition for AIDS<sup>2</sup>, emphasis is commonly given to the commercial sex workers, their clients, injecting drug users, tuberculosis patients and as a result, they are more often screen for HIV from this study it appears that the patients with prolonged unexplained fever needs equal, if not more, emphasis for HIV screening.

Physicians attending such cases should be more careful and suspicious; otherwise opportunities will be missed for early intervention. By conducting similar studies in different setting the authorities may assess the load of HIV among patients and keep the facilities of ART ready for those who need it.

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