



Bio-Social Profile of HIV Positive People Registered at the ICTC of a Tertiary Hospital in Assam, India

KEYWORDS

HIV/AIDS, Bio-social variables, Sero-positive, ICTC

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ABSTRACT In Assam, a relatively greater increase in HIV prevalence is noted in recent years. The present paper attempts to study the socio-demographic profile and risk behaviour pattern of HIV positive people tested and registered at the ICTC of Assam Medical College and Hospital, Dibrugarh, Assam. Data of 90 HIV positives (M=60; 66.7% and F=30; 33.3%) tested during 2008-2010 is included in the study. Majority (24; 26.7%) were in the age group of 36-40 years. Referral by government health centre/doctor (56.57%) was the main entry point to the ICTC. Heterosexual contact (96.7%) and non-use of contraceptives (70.51%) were the high risk behaviors. Only 37.81% of the positive people had prior knowledge of HIV/AIDS at the time of testing at the ICTC. Priority targeted interventions among various risk groups needs to be intensified to check the epidemic.

Introduction

Acquired Immunity Deficiency Syndrome (AIDS) is an immunoregulatory disease caused by the cytopathogenic virus - Human Immuno Deficiency Virus (HIV). HIV/AIDS is a global pandemic and a serious public health problem. With an estimated 2.5 million HIV infections, India has the second largest number of people living with HIV/AIDS in the world¹. HIV prevalence in India represents approximately 65% of the prevalence in South/South East Asian region, and 10% of global prevalence². The North East Indian states of Manipur, Mizoram and Nagaland; and the states of Maharashtra, Andhra Pradesh, Karnataka and Tamil Nadu are the most hard-hit states having the highest HIV prevalence. Assam is considered a low prevalence state; however, in the recent years it has experienced an upsurge in the epidemic. Current estimated adult HIV prevalence of the state is 0.1% among males and 0.06% among females. As per the latest figures of the Assam State AIDS Control Society (ASACS), there is a quantum jump in the number of people infected with HIV from 364 in 2001 to 4251 in April 2011, and the state has 1205 (M = 907; F = 298) people living with AIDS³.

Under the National AIDS Control Program phase III (2007-2012) the Integrated Counseling and Testing Centre (ICTC) began delivering cost-effective HIV/AIDS related services to all clients under one roof. This is a holistic approach to address all segments of the population by providing continuum of care in HIV/AIDS by means of early testing and detection, pre and post HIV counseling, referral and link services to ART centre's, etc. The ICTCs have provision for early infant diagnosis services (testing of babies <18 months of age) and Cotrimoxazole prophylaxis for babies. ICTC data can guide in identifying the various risk groups for priority targeted interventions to reduce HIV transmission. The present study based on the ICTC data of a small group of HIV positive people of Assam may provide some important insights regarding the epidemiological profile of individuals with HIV/AIDS in this part of India.

Materials and Methods

The data used in the study was collected from the records maintained at the ICTC of Assam Medical College and Hospital (AMCH), in Dibrugarh district, Assam. AMCH is a

premier multispecialty tertiary referral hospital serving the medical needs of Assam. Data of 90 HIV positive people registered during 03 years (2008-2010) was included in the study. Socio-demographic details of the positive people along with information on their entry point to the ICTC, their sexual history, knowledge of HIV/AIDS and morbidity conditions at the time of testing were collected from the records. Considering the sensitivity and ethical perceptions of the study, anonymity and confidentiality were strictly followed. Data was entered and analyzed using SPSS 16.0. Descriptive analysis of frequencies and percentages were generated for the variables.

Results

Table 1 shows the socio-demographic profile of the attendees with positive test result. Among the 90 registered HIV positives, 66.7% (n=60) were male and 33.3% (n=30) were female. The majority i.e. 24 (26.7%) of the attendees belonged to the age group of 36-40 years, while only 2 (2.2%) attendees belonged to the age group of 16-20 years. A total of 46.7% of males and 26.7% of females were married. The unmarried percentage (18.9%) accounts for 17 males only; the rest, 1.1% of males and 6.7% of females were divorced, separated or widowed. The total literacy rate of the male attendees was 62.2%, while among the females it was 26.7%. Also, 4 male (4.4%) and 6 female (6.7%) were found to be illiterate. The occupational status of the positive individuals shows that 39.2% were engaged as daily laborers and manual workers, student or self employed accounts for 19% and 14.6% of the attendees were engaged in government service and business. Significantly, 27% (n=20) of the HIV positives were housewives whose husband's were also HIV positives.

Table - 1 Socio-demographic profile of the Sero-positives

| Variables | | Male (%) N = 60 | Female (%) N = 30 |
|-------------------|----------|--------------------|----------------------|
| Age (in years) | 16-20 | 1 (1.1) | 1 (1.1) |
| | 21-25 | 4 (4.4) | 8 (8.9) |
| | 26-30 | 12 (13.3) | 9 (10.0) |
| | 31-35 | 12 (13.3) | 4 (4.4) |
| | 36-40 | 18 (20.0) | 6 (6.7) |
| | Above 40 | 13 (14.4) | 2 (2.2) |

| | | | |
|----------------|---------------------------------|-----------|-----------|
| Marital status | Unmarried | 17 (18.9) | 0 |
| | Married | 42 (46.7) | 24 (26.7) |
| | Widowed | 0 | 5 (5.6) |
| | Divorced | 0 | 1 (1.1) |
| | Separated | 1 (1.1) | 0 |
| Education | Illiterate | 4 (4.4) | 6 (6.7) |
| | Primary | 3 (3.3) | 3 (3.3) |
| | Middle | 9 (10.0) | 6 (6.7) |
| | Secondary | 33 (36.7) | 15 (16.7) |
| | Graduate | 11 (12.2) | 0 |
| Occupation | House Wife | 0 | 20 (27.0) |
| | Student/Self employed | 11 (14.9) | 3 (4.1) |
| | Daily laborers & Manual workers | 26 (35.1) | 3 (4.1) |
| | Govt. Service/ Business | 10 (13.5) | 1 (1.1) |

Referral by government health centre/doctor (56.57%) was found to be the most common entry point to the ICTC. Subjects referred by private practitioners/hospitals accounts for 21.05%; while, 14.47% of the attendees visited the ICTC voluntarily and 7.9% were referred for detection from the blood bank and NGO's working in the field of HIV/AIDS. The sexual history of the positive people reveals that 36.7% of the males had their first sexual contact with female sex workers (FSW) and 17.8% with their wives. Among females, 26.7% reported to have their first sexual intercourse with their husbands. The pattern of risk behavior shows that heterosexual contact (96.7%) was the commonest mode of transmission. A small number of positive attendees i.e. 3 (3.3%) were involved in homosexual practices. Regarding use of contraceptives, majority of the positive persons (70.51%) did not use any barrier as a protection against sexually transmitted diseases. Only 29.49% reported to have used some sort of contraceptive measures. An important finding of the study shows that out of the total male positive attendees only 29.27% had some prior knowledge of HIV/AIDS at the time of testing at the ICTC; while, among females it is only 8.54%. It is surprising that 43.90% male and 18.29% female positive attendees had no prior knowledge of HIV/AIDS.

Table - 2 Entry point to ICTC, 1st sexual contact, transmission route, contraceptive use and prior knowledge of HIV/AIDS

| A. Entry point to the ICTC | | | | |
|---|--------------------|----------------------|---------------------|---|
| Entry Point | Male (%) N = 51 | Female (%) N = 25 | Total (%) N = 76 | Remarks |
| Govt. health centre/doctor | 26 (34.21) | 17 (22.37) | 43 (56.57) | Data of 9 male and 5 female are not available |
| Private Hospital | 13 (17.10) | 3 (3.95) | 16 (21.05) | |
| NGO | 2 (2.63) | 1 (1.31) | 3 (3.95) | |
| Blood bank | 3 (3.95) | 0 | 3 (3.95) | |
| Self referred | 7 (9.21) | 4 (5.26) | 11 (14.47) | |
| B. Reported 1 st sexual contact of the positive people | | | | |

| Category | Male (%) N = 60 | Female (%) N = 30 | Total (%) N = 90 | |
|--------------------------------|--------------------|----------------------|---------------------|---|
| Wife | 16 (17.8) | 0 | 16 (17.8) | |
| CSW | 33 (36.7) | 0 | 33 (36.7) | |
| Friend | 8 (8.9) | 5 (5.5) | 13 (14.4) | |
| Husband | 0 | 24 (26.7) | 24 (26.7) | |
| Any other | 3 (3.3) | 1 (1.1) | 4 (4.4) | |
| C. Route of transmission | | | | |
| Route | Male (%) N = 60 | Female (%) N = 30 | Total (%) N = 90 | |
| Heterosexual | 57 (63.3) | 30 (33.3) | 87 (96.7) | Data of 5 male and 7 female are not available |
| Homosexual | 3 (3.3) | 0 | 3 (3.3) | |
| D. Contraceptive use | | | | |
| | Male (%) N = 55 | Female (%) N = 23 | Total (%) N = 78 | |
| Yes | 19 (24.36) | 4 (5.13) | 23 (29.49) | Data of 8 female are not available |
| No | 36 (46.15) | 19 (24.36) | 55 (70.51) | |
| E. Prior knowledge of HIV/AIDS | | | | |
| | Male (%) N = 60 | Female (%) N = 22 | Total (%) N = 82 | |
| Yes | 24 (29.27) | 7 (8.54) | 31 (37.81) | Data of 8 female are not available |
| No | 36 (43.90) | 15 (18.29) | 51 (62.19) | |

The present study highlights 19 different morbidity conditions of the HIV-infected individuals that were recorded at the time of testing at the ICTC. It is seen that 13.6% of the attendees visited/were referred to the ICTC with prolonged incidence of fever, cough and weakness; followed by 9.9% with complain of severe physical weakness, 8.6% with skin diseases, weakness and weight loss, and 3.7% with genital ulcer. HIV-TB co-infection along with other diseases viz. fever, cough, physical weakness, diarrhea and weight loss was present among 17.3% of the positive attendees.

Table - 3 Morbidity conditions at the time of testing

| Morbidity Conditions | No. (%); N = 81 |
|--|-----------------|
| Fever | 5 (6.2) |
| Cough | 4 (4.9) |
| Skin infection | 4 (4.9) |
| Abdominal pain | 1 (1.2) |
| Weakness | 8 (9.9) |
| Weight loss | 1 (1.2) |
| Fever and weakness | 3 (3.7) |
| Body pain and weakness | 2 (2.5) |
| Fever, cough and weakness | 11 (13.6) |
| Fever and weight loss | 5 (6.2) |
| Fever, abdominal pain and weight loss | 3 (3.7) |
| Liver problem | 1 (1.2) |
| Genital ulcer | 3 (3.7) |
| Skin infection, weakness and weight loss | 7 (8.6) |
| TB | 5 (6.2) |
| Diarrhea | 2 (2.5) |
| Fever, weakness and TB | 3 (3.7) |
| Fever, cough, weight loss, TB and Diarrhea | 6 (7.4) |
| All the above | 7 (8.6) |
| Total | 81(100) |

* Data of 9 subjects are not available

Discussion

As evident from the present study, HIV prevalence is highest among males than that of females. Previous studies conducted in West Bengal and Karnataka also reports similar findings⁴⁻⁵. However, the sizeable infection rate in females (33.3%) is a matter of concern, since it will lead to an increase in HIV transmission from mother to child. Generally, many married females whose spouse are sero-positive do not know that they are/may be HIV positive and the challenge is to make them aware to come forward for testing and adopt a healthy lifestyle; thereby access to care and treatment and help in preventing further transmission. It was observed that the prevalence rate is highest in the age group of 21-40 years (81%) indicating that HIV/AIDS threatens the most sexually active⁵ as well as productive segment of society in the prime of their working life. Most of the HIV positives registered at the ICTC came from rural areas; who work as daily laborers and manual workers in urban areas and most of the times stay away from their spouses. Factors like lack of awareness, low illiteracy rate, unsafe sexual practices, etc. aggravate the HIV transmission. Moreover, embarrassment, shyness and fear of insecurity due to discrimination restrict them from utilizing health services. Unprotected heterosexual intercourse was found to be the predominant mode of HIV transmission, which is supported by earlier studies from India⁶⁻⁷. The present study as well as other relevant studies indicates that TB is the most common opportunistic infection among HIV sero-positive patients⁸⁻⁹.

Conclusion

A relatively greater increase in HIV prevalence is noted in Assam. Although, the epidemic in the state was once centered among particular high-risk groups like the sex workers and their partners, and injecting drug users; what is more worrying is that the epidemic has begun to spread among the general population. Unprotected Heterosexual contact/promiscuous sex accounts for a growing proportion of cases. Onward sexual transmission among housewives and the clients of FSW is becoming increasingly apparent. HIV transmission from mother to child is also assuming frightening proportions. Hence, it is imperative to make priority targeted interventions more intensive among the various risk groups.

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