

Seroprevalence of HIV / AIDS infection among tribals in rural areas of Adilabad district (A.P.) India

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Seroprevalence of Human Immunodeficiency Virus (HIV) infection was carried out among tribals in rural areas of Adilabad District from February 2002 to December 2004. 390 individuals were counseled and screened for HIV status. Out of 390 individuals 6.6% (26) of seroprevalence is found in Tribal areas of Adilabad district of which 57% (15) were females 43% (11) are males. Women are biologically more susceptible to HIV infection than men. The higher prevalence rate was among the 21-35 years age group. The seroprevalence was high among married persons as against unmarried tribals. Our studies indicate that, HIV infection was highest among the illiterates (26%). But very less in well educated tribal people (7%). Most of the HIV infected individuals are laborers (26%) and women sex workers (19%), clinical manifestations are found individuals with STD (Sexually Transmitted Diseases) (23%). Our finding provide evidence to the spread and stabilization of HIV epidemic into all the risk rural population is the study area to Adilabad District. Higher prevalence was observes in villages close to the high ways. This is a serious public health issue as rural populations have less access to diagnosis and treatment. The higher rate in rural areas requires greatly increased efforts for HIV education outside cities and towns.

Key words : HIV, Aids, infection, Tribal.

INTRODUCTION

JOINT United Nations Program on HIV/AIDS and WHO has estimated that on December 2004, there might be around 39.4 million people have been infected with Human Immunodeficiency Virus (HIV). HIV/AIDS was first recognized in 1981, but probably existed at a low endemic level in central Africa before the HIV epidemic spread to several areas of the World during 1980s. Two decades into the epidemic and there is still no vaccine and no "cure" for AIDS. There is considerably more information now available on how the HIV leads to AIDS, its spread, and wealth of "lessons learned" in implementing prevention strategies and increased understanding about what constitutes effective management of HIV / AIDS patients. The social and economic conditions of that facilitate the spread of HIV are also well understood.

In India 90% of cases with HIV infection are aged between 15 and 45 years and belong to socially and economically disadvantaged groups. The male and female ratio is 5:1, with female cases being mainly sex workers. The predominant virus, HIV-1, or cases with HIV-2 and mixed infections are being proposed from post cities. The present situation in India is similar to the early pattern in Africa where a sharp increase in seroprevalence among high risk groups was followed by spread to the general population.

Tribes in India, who constitute 15 per cent of the geographical area and nearly 8 per cent of the population, are truly disadvantages and marginalized population of our country. Poverty, illiteracy, malnutrition, unsanitary conditions and observe of health education have been found responsible for the poor health of the tribal communities. It is essential to have the details of the prevalence of disease in risk groups to plan effectively to control the disease.

Andhra Pradesh has one of the fastest increasing HIV / AIDS prevalence rates in India. In 2004 the ANC prevalence rate was 2.25% and NACO has estimated that more than 450,000 people are living with HIV in Andhra Pradesh. The second highest number after Maharashtra state. This is 10 % of the total HIV cases in India and 90% of the infections in the state occur through sexual transmission. More than 20% of STD patients in urban areas and 30 percent in rural areas tested positive for HIV. The

higher rate in rural areas requires greatly increased effects for HIV education outside cities. The present paper gives a current update of HIV infection among tribals in rural areas of Adilabad district, Andhra Pradesh, which epidemic of HIV has spread extensively.

MATERIALS AND METHODS

The study is conducted during February 2002 to December 2004 in selected 7 tribal rural areas (Gudihatnoor, indervelly, utnoor, Narnoor, Kerameri, Jainoor, Hasnapoor) of Adilabad district of A.P. by attending the monthly camps in each villages, the study protocol consists of informed consent, Questionnaires elaborating Age, Marital Status, Educational Status, Gender, Occupation, High-risk behavior. Geographical locations and clinical manifestation. The author stayed at the above said medical camps and with the help of the counselor, interacted with HIV+ve patients with established questionnaires.

Blood samples were collected from 390 patients (Tribal Villages) by attending the monthly camps in each village during the study period. Schedule containing the host parameters was filled by interviewing patients before the blood samples was taken. 4-5ml of intravenous blood was withdrawn from each patient and stored in a sterile bottle. After half an hour the sera was separated and the bottles were stored in deep fridge. The HIV seropositivity is confirmed by HIV-tridot rapid test and Comb-AIDS or EIA (Enzyme Immuno Assay) test.

RESULTS AND DISCUSSION

In this study 390 individuals were counseled and screened for HIV Status. Out of 26, 11 (42.3%) males and 15 (57.7%) females were recorded as HIV+ve individual. According to Table:1. 6.6% of seropositivity is found in Tribal areas of Adilabad district of which 57.7% are females and 42.3% are males. Women are biologically more susceptible to HIV infection than men. Men are also more effective at transmitting the virus as semen is more infectious than vaginal fluid. Women may also have undetected sexually – transmitted infection, which increase the risk of HIV infection. In this study 69.3% of seropositive persons were married where as 30.7% were unmarried

In our studies most of the HIV infected individuals are

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Laborers 27%, Female sex workers 19.2%, Housewives 15.4%, Farmers 15.4%, and Drivers 11.5%. In our studies most of the clinical manifestations are found in infected individuals with STD (Sexually Transmitted Diseases) 19.2%. Some other criteria of clinical manifestations are Pulmonary Tuberculosis (19.2%), Oral Candidiasis (23.2%), Weight loss (11.5%) and in some due to some specific reason of not following up of HIV positive patients

primary education 15.3% are infected and XIIth standard individuals are 19.2% infected.

The first case of HIV infection in India was diagnosed among commercial Sex workers in Chennai, Tamil Nadu in 1986. Since then, HIV infection has been reported in all States and Union Territories. India has a population of one billion, around half of whom are adults in the sexually active age group. Globally,

Table 1: HIV Incidence by baseline characteristics (Gender, Marital Status, Occupation & Clinical manifestations.)

Characteristic		HIV Seropositive Cases	
		No.	%
Overall Prevalence (out of 390)		26	6.6
Gender	Female	15	57.7
	Male	11	42.3
Marital Status	Married	18	69.3
	Unmarried	08	30.7
Occupation	Laborers	07	27.0
	Drivers	03	11.5
	Farmers	04	15.4
	Housewives	04	15.4
	Female Sex Workers	05	19.2
	Others	03	11.5
Clinical Manifestations	Oral Candidiasis	06	23.2
	Weight Loss	03	11.5
	Pulmonary Tuberculosis	05	19.2
	Chronic Diarrhea	02	07.7
	Prolonged Fever	03	11.5
	STDs	05	19.2
	Not recorded	02	07.7

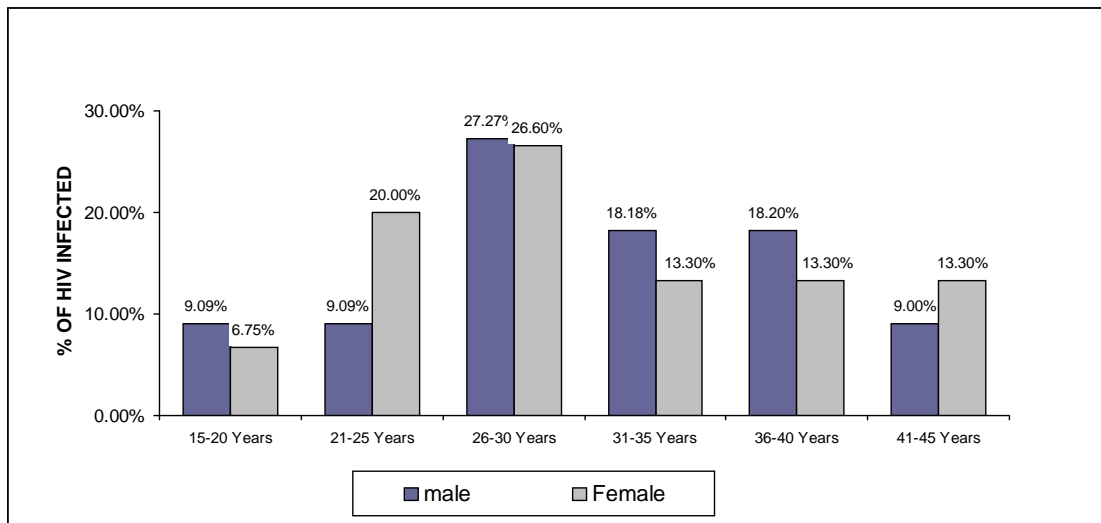
(7.7%) of clinical manifestations are not recorded.

According to Fig: 1. it can be noted that, the highest prevalence rate was among the 21-35 years age group. Analysis of results with emphasis on the age of the Male and Female patients, it has been shown that highest incidence was 36% noted among the age group of 26-30 years. So it is clear from the data that the HIV infection occurs in both male and female in the age group of 21-35 years. Fig: 2. Shows that, HIV infection was highest among the female illiterates (33.3%). But very less in well educated tribal people (7.7%). Individuals who possess

just under half of all people living with HIV are female. Women and girls make up almost 57% of all people infected with HIV in Sub-Saharan Africa, where a striking 76% of young people (aged 15-24 years) living with HIV are female. In most other regions, women and girls represent an increasing proportion of people living with HIV, compared with five years ago. A recent UNICEF survey found that up to 50% of young women in high-prevalence countries did not know the basic facts about AIDS.

Our study is also states that, most of the infected are females (57.6%) than males. Increases in the percentage of

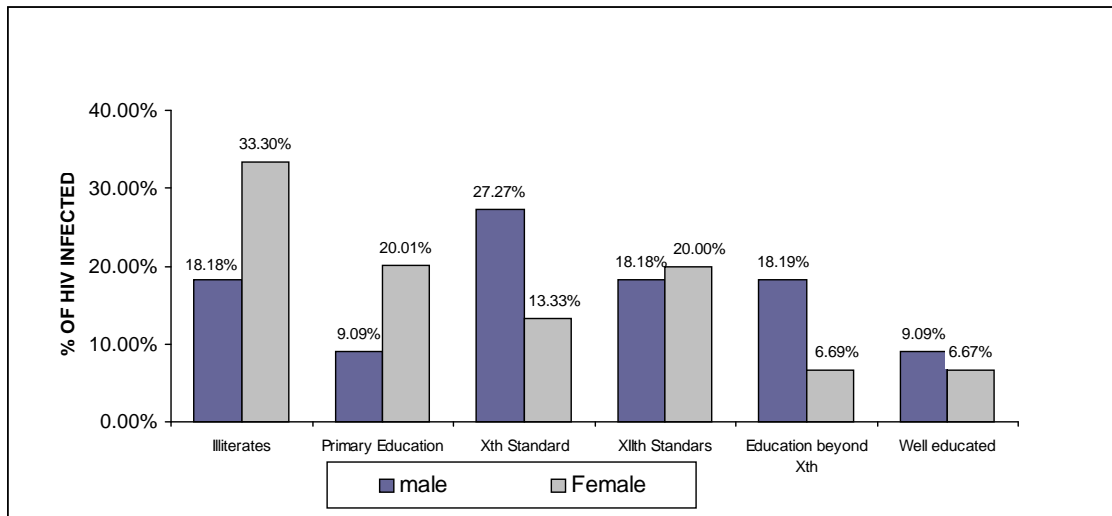
Fig. 1 : Age wise distribution of HIV/AIDS cases.



HIV-infected women also appear to be rising in North America, Latin America, and Central Asia. Studies which have examined the prevalence of HIV infection in married women have found that husbands reported behavior was the major risk factor for

study would not be possible. Authors thank Mr. Prashant, Technician of Govt. HQRS. Hospital, Adilabad for cooperation. Authors thank Technician from the serology Department of Govt. Hospital for assistance in performing the HIV Serological tests.

Fig. 2 : Level of literacy in HIV/AIDS patients.



many women. Initial cases were reported among female sex workers in the tribal rural areas where ratios have risen dramatically. The Behavioral Surveillance Survey (BSS) 2004, conducted by NACO, showed that Andhra Pradesh is one of the highest levels of STD prevalence in India. More than 30% of STD patients in urban areas and 30% in rural areas tests positive for HIV.

We observed HIV prevalence of 6.6% among rural tribal areas of Adilabad District, Andhra Pradesh and this findings provide evidence to the spread and stabilization of HIV epidemic into all the risk rural population in the study area in Adilabad district. Although HIV/AIDS is still largely concentrated in at risk populations, including commercial sex workers, injecting drug users, and truck drivers, the surveillance data suggests that the epidemic is moving beyond these groups in some regions and into the general population. It is also moving from urban to rural districts. It is estimated that in the region of 70% of the sex workers in Mumbai are HIV positive. Sex workers in Mumbai are controlled by madams, pimps and moneylenders and because of this, reaching sex workers with HIV prevention is a major challenge. Truck drivers are crucial in spreading STDs and HIV infection throughout the country. They transfer HIV from urban to rural settings.

It might be important to further investigate the dynamics and role of commercial sex workers along the high ways on disseminating HIV infection to rural areas with a view to identify appropriate prevention and control strategies. The problem of HIV/AIDS has made in roads in the general and low risk population of India and HIV as already spreading in the tribal villages. In a tribal setting lack of adequate trained manpower, insufficient access to health infrastructure and low level of literacy, intensive long-term preventive strategies for young people and women must be initiated immediately.

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REFERENCES

- AIDS and Global health* ICMR Bulletin (2003). 23 (1).
 AIDS epidemics update December (2003): *UNAIDS/WHO Report*.
Bhave Geetha G. et al (2000): *HIV Serosurveillance in promiscuous females of Bombay, India* CARC CALLING.
Brajachand Singh Ng et al (1993): *seroprevalence of HIV among the general hospital patients in manipur* CARC CALLING.
Dietrich U, Maniar JK Rubsmen – walgmann H. (1995). *The epidemiology of AIDS in India*. Trend Microbial, 3, 7-21.
George S; Jacob M; John TJ; Jain MK; Nathan N; Rao PS; Richard J; Antonisamy B (1997): *A case control analysis of risk factors in HIV transmission in South India – J Acquir Immune Defic Syndr Human Retroviral*, 14(3), 290–293.
Jacob M. John TJ Geroge S, Rao PS Babu PG. (1995). *Increasing prevalence of human immunodeficiency virus infection among patients attending a clinic for sexually transmitted diseases*. Indian J. Med Res, 101, 6-9.
Mehendale SM. (1998). *HIV infection amongst persons with high-risk behavior in pune city: Update on findings from a perspective cohort study*. AIDS Res Rev, 1, 2-9.
Memon GM (1997): *Sero Surveillance of HIV infection in people at risk in Hyderabad Sindh: J. Pak Med. Assoc.*, 47 (12) , 302-304.
 UN AIDS – *Joint United Nations Program on HIV/AIDS UNAIDS) and World Health Organization (WHO)*, AIDS. Epidemic update: December 1999. Geneva, UNAIDS, WHO, 1999, 24.
Vernazza PL. Eron JJ. Fiscuss SA. et al (1999): *sexual transmission of HIV Infectiousness and prevention*. AIDS, 13, 155-66.
Ward J.E. et.al (1987); *Risk of Human Immuno Deficiency virus infection from blood donors who later developed the acquired immunodeficiency Syndrome* Ann. Intern. Med., 106 - 161,