

Serosurveillance of HIV in Reproductive Age Group Women

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Summary

Sero surveillance for HIV among reproductive age group women was done in a Cohort comprising of 500 cases.

After detailed history taking thorough clinical examination was done and specific investigations like urethral and vaginal discharge were done. Serological Elisa test for HIV 1 and HIV 2 was done of the 500 cases. 33 were found to be HIV positive. 75 to 80% of HIV positive females acquired HIV infection through sexual intercourse, 27.2% were heterosexually promiscuous and 54% had HIV positive husbands having higher risk practices. These 33 females were in the age group of 25 to 34 years, the mean age being 28.25 years. Intravenous drug users and infection through equipments, needles, syringes and blood transfusion totalled 3-6%. Among the HIV positive patients STDs were found to be prevalent in 45.4%.

Introduction

AIDS has emerged as an epidemic since 1981 and from its origin in USA, it has become pandemic in last 17 years. Joint U.N. programme on HIV/AIDS and WHO estimates the number of people living with HIV to be 33.4 million (AIDS watch 1997, AIDS 1996, 1997, 1998) and WHO project a cumulative case load of close to 40 million by the year 2000.

Increasingly, the spotlight is on the spread of HIV through the Asian continent especially South East Asia. Seven million Asians are already infected. Unprotected heterosexual intercourse is the primary risk factor for infection in the reproductive age group women.

India has the valid reason to be alarmed taking into account the load of HIV infection. Since the detection of HIV infection in the commercial sex workers in Tamilnadu, in 1986, HIV is growing very fast in the

country. Epidemic is fairly in advanced stage in Maharashtra, Tamilnadu and Manipur, while it is still young in many northern states. Maharashtra accounts for close to 50% of all HIV reported cases in India. Sentinel Surveillance data (1998) collected reveal that in Maharashtra the infection in pregnant, in high risk group like STD clinic attenders, CSW, injection drug users etc. has shown galloping increases. It is widely recognized that India has a significant potential for the transmission and spread of HIV infection. As per WHO estimates (AIDS watch 1997) India contributes more than 1/2 of the total HIV positives in South East Asia.

By September 1999 a total number of 3.53 million persons were screened out of which, 88,775 persons were found to be HIV positive with a seropositivity rate of 25.12 / thousand (Govt of India, 1999).

Important issues pertaining to prevention of HIV infection in women are mandatory screening of women

of reproductive age group, counseling all women about HIV transmission – through surveillance. Once a decision is made for surveillance, informed consent must be obtained. An important component of testing procedure is maintaining confidentiality, which increases the acceptance of testing.

Surveillance of HIV infection currently involves detection of antibodies against HIV by an expensive ELISA test. These are highly sensitive but their specificity is reduced by cross-reaction with components other than HIV.

Aims & Objectives

This study conducted at MY Hospital, Indore was undertaken for serosurveillance of HIV infection in females of reproductive age group and for studying the predictive value of screening for high risk patients for HIV.

Material and Methods

The present study was done in a cohort of 500 patients presenting to the Department of Obstetrics & Gynecology, M.G.M. Medical College & M. Y. Hospital, Indore from November 1998 to December 1999. Patients were clinically assessed and records were made.

HIV is much related to the human behaviour causes a social stigma. When we started taking history of the patients, some of them did not come back second time. This may be called the first group of patients who were feeling guilty and so did not turn up. So we made second group of patients with whom we had consultations with three or four times so as to win their confidence. These patients cooperated fully and gave their complete family, personal and social history.

Specific questionnaires regarding complaints related to STDs-e.g. burning pain, discharge, ulcer, growth, related symptoms were filled in and risk factors like multiple contacts, previous STD, blood transfusion and drug injection. Complete general & local genital examination to look for genital ulcer, growth, discharge & P/S, P/V examination was done.

Routine investigations done were : Hb, total & differential W.B.C. Count, ESR and Urine examination.

Special Investigation done were : Serology for HIV, V.D.R.L., blood Urea, Serum creatinine, Serum electrolytes, X-ray Chest, ECG, sputum examination, CSF examination, abdominal sonography and examination of urethral and vaginal discharge

Observations

Thirty three (6.36%) were found HIV positive. 57.5% or 19 were in rural and 42.4% or 14 were urban. Tables I, II, III, IV, V, VI, VII give the details of the findings in our study.

Table I : High Risk Behaviour Groups.

Pattern	No. of cases	% cases
PID	134	26.8%
STDs	72	14.4%
TB	53	10.6%
Hepatitis B	48	9.6%
Recurrent Preg. Loss	23	4.6%
Blood recipient	65	13.0%
Heterosexual	77	15.4%
Injection Drug Users	2	0.4%
Ca Cervix	11	2.2%
Ca Vulva	2	0.4%
Husband with HIV positive	13	2.6%

Table II : Age Distribution of Sero Positive cases

Age in Years	Total cases		Sero +tive cases	
	No.	%	No.	%
Below 20	11	2.2	1	3
20-24	46	9.2	4	12
25-29	207	41.1	16	48
30-34	114	22.8	7	21
35-39	89	17.8	3	9
40 & above	33	6.6	2	6
Total	500	100	33	100

- Maximum number of cases in Age group of 25-39 years
- Median age is 28.4 years

Table III : Patterns of Disease in HIV Sero positive Females

Disease	No. of HIV Positive	%
PID	11	33.3%
TB	1	3%
STDs	15	45.4%
Hepatitis B	4	12.1%
Ca Cervix	1	3%
Ca Vulva	1	3%
Recurrent Abortion	1	3%

Table IV : Problem Sources of Infection of AIDS among HIV Sero Positive Female.

Source of Infection	Total No. of Cases	%
Heterosexual	9	27.2%
Blood Transfusion	1	3%
IDU (Indirect)	2	6%
Equipment / Needle	2	6%
CSW	1	3%
HIV Positive Husband	18	54.4%

Table V : Educational Status Among HIV Positive Females

Education	Total No. of Cases	%
Illiterate	17	51.5%
Primary	12	36.3%
Middle	2	6%
Higher Secondary	1	3
Graduate	1	3

Table VI : Socio-economic Status among HIV positive females

Status	Total no. of Cases	%
Low	13	39.3%
Low Middle	11	33.3%
Middle	6	18.1%
Upper Middle	2	6%
High	1	3%

Discussion

AIDS threatens the very fabric of society, it affects people in their most reproductive age resulting in several direct and indirect socio-economical imbalances. HIV infection is believed to be invariably fatal irrespective of best possible treatment. It is necessary to screen high risk population for HIV infection at regular intervals, so as to know the trends & patterns of this disease in community whereby people can be counseled about preventive measures.

The most common root of HIV infection is through sexual transmission, homosexual or heterosexual. Heterosexual contact has emerged as the single largest cause for spread of HIV. Women are at greater risk of being infected by their male partner because transmission from male to female is more efficient than from female to male. It is easier for the virus to be transmitted, if the uninfected partners are already suffering from STDs and the risk increases 4 to 6 fold particularly, if the partners have genital ulcers. STDs remains a serious health problem, in South East Asia and ranks among the top 5 diseases in adults who seek health care services (Sarkar, 1997) According to National AIDS control programme (Govt of India, 1999) as on February, 1999 of a total of 3.43 million individuals practicing risk behaviours and screened for HIV infection 84006 were found to be seropositive, indicating a

seropositive rate of 24.44 per thousand. At the same time a cumulative total of 6846 cases of AIDS have been reported (Centre for D/S Control, 1995). In India highest number of HIV infection have been reported in Maharashtra and Tamil Nadu and among injection drug users in the North Eastern States of Manipur (Govt. of India, 1999)

The present study shows that the major mode of HIV transmission is through sexual intercourse which was found to be 27.2% among heterosexual promiscuous cases and 54.5 females were infected from HIV positive husbands. Presence of STD is a marker for high risk behaviour. Control of STDs contributes significantly to a reduction in HIV transmission. In the present study 33 out of 500 cases i.e. 6.6% were positive for HIV antibodies. Maximum HIV infected cases were seen in age group of 25-29 Yrs (48%) followed by 30-34 yrs(21%). This high percentage of disease is affecting mainly the people in sexually active and economically productive age group. The second route of HIV transmission is through contaminated needles and syringes among the injection drug users (6%) and through blood transfusion is (3%). Probability of transmission of HIV infection through infected blood is highest. Risk of HIV transmission through the sharing of unsterilized needles and syringes by injection drug users is very high. In Myanmar, Thailand and north east India injection drug use has resulted in a dramatic increase in HIV infection.

In the present study 51.5% of the HIV positives were illiterate. There is lack of knowledge on sexual behaviour and practices and low exposure to mass media. Hence it is important to identify high risk groups in the population, for giving proper information, education and communication. Over the last decade HIV has continued to spread among the different risk group at different rates. Infact the geographic spread has been quite uneven and variable, being determined by distribution and pattern of risk behaviour in different areas.

In Indore, the HIV epidemic was started in 1990. HIV seroprevalence has almost doubled from 3.87% in 1993 to 7.76% in 1998. This is alarming. This requires urgent and effective steps to control this epidemic by early diagnosis, and counseling of HIV positives. Although heterosexual behaviour accounts for maximum

Table VII : Occupational Status of HIV Positive Females & Males (Husbands).

Sex	Truck Driver	%	House Wife	%	Executive Business	%	C.S.W.	%	Labourer	%	UE	%
Male	6	33	-	-	1	5.5	-	-	7	38.3	4	22
Female	-	-	22	66	-	-	1	3.0	10	30.3	-	-

and rapid spread of HIV among general population about 75% of full blown AIDS cases reported acquiring infection through sexual route. Transmission from injection drug users and transmission due to infusion of infected blood and blood products are a serious issue as an unsuspecting population is getting infected in this way.

The epidemic is growing day by day at an alarming rate. The treatment of various opportunistic infections, effective control of various STDs, safe sexual practices, proper screening of blood and blood products before infusion, public and mass media education against injecting drugs and AZT prophylaxis to HIV positive mothers and increase in awareness among the general population will be main stay in control of HIV epidemic.

Immunosuppression in HIV is responsible for increasing the susceptibility, altering the natural history and altering the response to therapy. Interaction between HIV related and STD related molecular events occur which explain the Epidemiology Synergy between the two.

As the number of AIDS patients continue to rise and as the epidemic continues, we as clinicians are expected to provide skilled care.

Conclusion

HIV has emerged as the most important STD of the 20th Century.

Conditions responsible for development of HIV are similar for both men and women. The only exception being Kaposi's Sarcoma which is very unusual in women. There are two other conditions related to HIV which are specific to women only e.g. vaginal candidiasis and CIN. Infection through heterosexual contact

accounts for an increasing proportion of new infection in women.

One of the most tragic aspect of AIDS epidemic particularly among reproductive age of women, is the transmission of HIV from mother to child i.e. vertical transmission.

HIV can be transmitted to the infant during pregnancy, at the time of delivery and by breast feeding. HIV does not cause congenital abnormalities or increase spontaneous abortion. Pregnancy does not accentuate the HIV disease progression in women. Transmission rates range from 13-30% in Europe and USA.

HIV positive patients necessitate a close liaison between the treating Obstetrician and Physician through out the pregnancy. Consideration should be given to early Caesarean section and replacing the breast feeding by supplementation.

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