

HIV SCREENING IN PREGNANCY

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SUMMARY

The study was conducted to know seroprevalence of HIV infection in pregnant females coming for antenatal care, delivery and for/with abortion. 5/975 cases were positive twice by ELISA but none were confirmed positive by western Blot Test. Majority of the cases were young, literate and in the middle socio-economic group, inspite of high literacy rate awareness of STDS and AIDS was present in a very low percentage of cases (7.9% and 2.3%). None of the HIV (ELISA) (+) were VDRL (+) indicating that along with heterosexual transmission, blood transfusion, tattoo, acupuncture, history of injection, surgery and hospitalisation etc. may have important role to play in the transmission of HIV infection.

It seems HIV infection in this part of the country is still in early stage and can be prevented by public health education.

INTRODUCTION

Offering HIV testing to pregnant women provides an unique opportunity of targeting the young and sexually active population, who are most at risk. (McCarthy et al 1992). The most widely adopted method of antenatal testing in western world is

to concentrate on high risk women, but it has been seen in several studies to miss a significant proportion of women (McCarthy et al 1992) as it depends on self identification of risk behaviour (Wenstrom et al 1989).

Indian women, like most women in developing countries are vulnerable to HIV infection than men due to several factors. Biologically, women are more susceptible to HIV infection than men (male to female

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transmission is 2-4 times as efficient as female to male transmission); high prevalence of STDs and PIDs facilitates HIV infection; women receive blood transfusion related to child birth or anaemia-sometimes even unnecessarily; poverty, domestic abuse and lack of economic alternatives forces women in commercial sex; with lower literacy levels women use contraceptives without knowledge of HIV infection; traditional practices eg tattooing, female circumcision etc. could place women at high risk of acquiring HIV infection.

The Indian Council of Medical Research (ICMR) indicates that HIV positivity rates had increased from 0.2 to 0.7% between 1985 to 1993.

Based on reports received to NACO upto 31/3/95, 18019 cases were confirmed to be HIV seropositive, (Seropositivity rate 7.28/1000). Of these 0.51% were antenatal women and 2.22% were recipients of blood or blood products.

MATERIAL & METHODS

This study was carried out between 1995-96 on 975 pregnant women in the Department of Obstetrics and Gynaecology, in collaboration with Department of Microbiology.

Study subjects were-pregnant women registering in the OPD for antenatal checkups, unregistered pregnant women delivering in labour room and pregnant women coming for or with abortion.

A detailed history for any risk behaviour risk factor in patients or in

their husbands were noted. Past history of STDs and awareness for STDs and AIDS were asked.

Blood was taken for HIV testing; for which ELISA method (Innotest HIV 1/2 ab, Innogenetics, Belgium) was used.

Any sample testing positive by ELISA was rechecked by repeat ELISA sample positive twice by ELISA were sent to New Delhi for confirmation by Western Blot test.

Blood sample for VDRL test was also taken in all cases. Slide flocculation method was used for VDRL testing.

OBSERVATION

The study population were mainly-young women (76.1% - 35 yrs), majority were educated (77.05%). 2 unmarried and 1 widow were also included in the study, rest all cases were married. Majority cases, (85.4%-833/975) were from middle socioeconomic group.

Table I : Demographic characters of the cases studied.

Table II : Awareness about STDs and AIDS in the cases studied.

Table III : Relationship between reporting of risk factors and HIV (ELISA) positivity.

975 samples were screened : 5 cases were positive twice by ELISA but none were confirmed positive by western Blot test.

DISCUSSION AND RESULT

Reports received by NACO upto 31/3/95 indicates that 1094 AIDS cases have

Table I
DEMOGRAPHIC CHARACTERS OF THE CASES

	No.	%
Age (years)		
12 - 15	2	20.43
16 - 20	207	20.43
21 - 25	344	32.28
26 - 30	218	22.35
31 - 35	166	17.02
> 35	38	3.9
Educational Level		
Nil	224	22.95
Upto VIII std	243	24.92
IX - XII	274	28.1
Graduation	166	17.02
Post graduation	68	6.99
Obst history		
Primi	203	20.82
Multi	772	79.18
Contraceptive Use		
(+)	104	10.67
(-)	871	89.33

Table II
AWARENESS ABOUT STDs AND AIDS IN THE CASES STUDIED

	No	%
Aware about STDs	77	7.9
Aware about AIDS	23	2.36
Not aware	898	92.1

All the cases who were aware about STDs were also aware about AIDS.

Table III
RELATIONSHIP BETWEEN REPORTING OF RISK
FACTORS AND HIV (ELISA) POSITIVITY

	HIV (+) (n=5)		HIV (-) (n=970)	
	No.	%	No.	%
No risk factor	1	20	729	75.15
Risk factors (+)	4	80	241	24.85

X^2 8.043 DF = 1 P < 0.05 (S)

Table IV
HIV POSITIVITY IN PREGNANCY IN INDIA

Year	Study conducted by	Place	No screened	HIV (+)
1991	Khorseed	Bombay	5913	6
1992	Singh et al	Manipur	232	2
1993	Pal et al	Allahabad	250	None
1995	Kalaivani	Coimbatore	402	None
1996	In present study	Varanasi	975	None

been reported in India of which 255 are females. Of the total HIV seropositive 0.51% are antenatal women, as is seen in serosurveillance reports received by NACO upto March 1995.

Wide variation in seropositivity rate has been reported in different population in pregnant women (African-0.5%-9.1% Italy-0.16-1%, France 3-4%, USA-0.14-0.21%).

Table IV : HIV positivity in pregnancy in India.

A significantly higher incidence of risk

factor was seen in HIV ELISA positive cases. Barton et al (1989) showed that in their study seropositivity in the group having risk factor for HIV infection was 7.1%, while patients not having risk factor for HIV infection did not test positive for HIV antibodies. But Lindsay et al (1991) reported that 70% of HIV infected women did not self acknowledge risk factors for HIV infection and felt that high risk screening is likely to miss many positive cases.

Though none of the cases reported-pre

or extramarital sex, multiple partners, i.v. drug abused such history is difficult to get in crowded OPDs and wards. Another factor of importance is that besides heterosexual transmission, history of injections (for medical reasons), surgery, blood transfusions, tattoo, acupuncture etc may play a role in HIV transmission.

Majority of the cases were young, literate and in the middle socioeconomic group. This gives a 'population bias' to this study as uneducated, and women from low socioeconomic group, who are a sizeable proportion in general population do not come for hospital care delivery.

Though the study population is small to draw any definite conclusions, it is possible that educated women of middle socioeconomic group are in a stable and mutually faithful monogamous relationship with their husbands, accounting for the 0% prevalence of HIV. It may be that HIV infection is still in very early stages in this part of country and has not yet spread to the low risk general population.

In spite of high literacy levels seen in the cases (much more higher than the literacy rate seen in women in India), awareness about STDs and AIDS was present in 7.9% and 2.46% of cases only and 92.1% were not aware about STDs/AIDS.

This stresses the need for extensive public education and information programmes for prevention of HIV transmission, as there is no cure for their devastating and debilitating disease (Barton et al 1989). As the AIDS virus has spread it has become increasingly apparent that in many senses AIDS is a social phenomenon and the only way to bring about a rapid and profound change is through a social programme of education and information, which takes into account social, political and economic imperatives of the world communities, but nevertheless assists them to avoid HIV infection.

REFERENCES

1. Barton J.J., O'Connor T.M., Cannon M.J., Weldon-Linne C.M. *Am. J. of Obstet and Gynec.* 160: 1316; 1989.
2. Kalaivani, K. *The J. of Obstet and Gynec. of India.* 45: 341; 1995.
3. Khorseed M., Pavri : *Calling Bulletin of the Centres for AIDS research and control.* (No.3): 3-5; 1991.
4. Lindsay M.K., Peterson H.B., Willis S., Slade B.A., Gramling J., Williams H., Klein L., *Am. J. of Obstet and Gynec* 165: 961, 1991.
5. McCarthy K.H., Johnson M.A., Studd. J.W.W. *Brit J. of Obstet and Gynec.* 99: 867, 1992.
6. Pal A., Ghosh U.K., Ganguly G., Baveja R., Pandey R.C. *J. Obstet and Gynec of India.* 43: 696, 1993.
7. Singh B.C., Devi Y.L. *J. of Obstet and Gynec of India* 42: 576, 1992.
8. Wenstrom K.D., Zuidema L.J. *Obstet. Gynec.* 74: 558, 1989.