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Seroprevalence of HIV antibodies in the patients of sexually transmitted infection

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Abstract

Background and Aims: AIDS, the acquired immunodeficiency syndrome is a fatal illness caused by a virus known as a human immunodeficiency virus (HIV) which breaks down body's immune system, leaving the victim vulnerable to a host of life threatening infection, neurological disorders or unusual malignancies. Presence of a conventional STI such as Syphilis or Chancroid increases the risk of sexual HIV transmission considerably, perhaps as much as 10 to 100 fold for a single act of intercourse.
Methods: One hundred and twenty three patients clinically diagnosed as cases of STI were studied for seroprevalence of HIV antibodies. History, clinical examination and lab investigations were done for all the patients so as to group them in various types of STI.
Results: Out of one twenty three patients of STI, 9 patients only had presence of HIV antibodies.Most of the patients of STI belonged to rural background.
Conclusion: While dealing with patients of STI it is imperative to take a proper history and to treat the underlying cause. Counselling is must in all cases.

Keywords: HIV, STI.

Introduction

India is a major epicenter of the AIDS epidemic. The predominant heterosexual mode of transmission, poor socioeconomic strata and inadequate health care system greatly contribute to this epidemic (1).

Much is known about the causal microorganism, the Human Immunodeficiency Virus(HIV) than about any other virus. There are methods of proven efficiency for preventing transmission. If we can slow the sexual transmission of HIV, we can curb the AIDS pandemic. This is because

AIDS is essentially a sexually transmitted infection (STI) although, like some of the conventional STIs, it can also be transmitted through blood and perinatally. Therefore, STIs are markers of risk behavior for HIV transmission as well as co-factors in HIV transmission. Keeping this in view, a number of researchers from different parts of the world have focused their attention on this high risk group i.e. STI patients to ascertain the trends of HIV infection in the community.

Italia in his study found that seroprevalence among STI patients is the most sensitive indicator of entry of HIV infection in a community (2). In the absence of any cure, there is a prime importance of prevention of infection. One aspect of this is case detection and prevention of further infection.

The connections between HIV and STIs are three fold:

- Several STIs cause lesions or open sores which may serve as a portal of entry directly into blood stream and facilitate HIV transmission.
- Some STIs are considered to be co-factors, which assist in the immune system malfunction leading to AIDS.
- People who leave themselves open to STI infection also are at risk of eventual HIV infection (CDC, 2000).

There is two to five fold-increased risk of HIV transmission associated with sexually transmitted infections.

Materials and Methods

One hundred twenty three confirmed cases of STIs were diagnosed on the basis of detailed history, clinical examination and laboratory tests. In our study haemoglobin, total leucocyte count, differential leucocyte count, fasting blood sugar and urine analysis of each patient was done. Screening of blood samples for HIV 1 and 2 antibodies of all cases was conducted after voluntary counselling. In the present study ELISA testing for HIV 1 and 2 antibodies using indirect solid phase ELISA was done. The optical density (OD) and cut off (CO) values were computed using microwave ELISA reader at 450nm wavelength. Sera giving clear negative results were accepted as such while sera giving equivocal results were retested using ImmunoCombtest. ImmunoComb B1-spot HIV-1 and HIV-2 kit Organics was used.

- Gram stain smear for Gonnococci and Chancroid was done
- Microscopic examination of urine to detect pus cells for urethritis.
- Uretheral smears (Direct and after milking the urethra) and prostatic smears (after prostatic massage) were examined for urethritis and prostatis where necessary Gram stained smears were examined.
- Two glass urine examination for urethritis.
- Dark ground Illumination microscopy (D.G.I.) test for Syphilis was done.
- VDRL(Qualitative and Quantitative).
- Direct examination of scrapings in 10% KOH for Candidiasis
- Examination of wet film for Trichomoniasis.
- Examination of Tzanck smear for Herpes Genitalis.

Results

Out of one twenty three patients of STI ,out of 9 HIV positive cases,55.56% were in the age group of 15 to 29 years,1 (11.11%) were in age group of 30 to 45 years and 3(33.33%) cases were in the age group more than 45 years. No HIV positive cases were detected in less than 15 years of age as shown in Table 1.

Table 1: Age wise distribution of HIV positive cases in STI group

Age(Group-wise)	HIV Positive	Percentage
<15 years	Nil	Nil
15-29 years	5	55.56%
30-45 years	1	11.11%
>45 years	3	33.33%
Total	9	100%

Table 2: Sex wise distribution of HIV positive cases

Sex	HIV positive	Percentage
Male	6	66.67%
Female	3	33.33%
Total	9	100%

In STI group out of nine positive cases, six (66.66%) cases were males and three (33.33%) cases were females. Ratio of HIV positive males to HIV positive females was 2.

Table 3: Area wise distribution of patients in STI group

Area	Number	Percentage
Rural	64	52.03%
Urban	59	47.97%
Total	123	100%
X^2	DF	P value
1.451	1	>0.05

In STI group out of one hundred and twenty three cases 64(25.03%) were rural and 59(47.97%) were urban as shown in shown in table 3.Comparison of rural and urban cases in both groups is statistically not significant.

Table 4: Area wise distribution of HIV positive cases in STI group

Area	HIV positive	Percentage
Rural	8	88.89%
Urban	1	11.11%
Total	9	100%

In STI group out of 9 HIV positive cases 8(88.88%) cases were rural and 1(11.11%) cases were urban as shown in table 4.

Table 5: Distribution of patients according to marital status in STI group

Marital status	Number	Percentage
Married	74	60.16%
Unmarried	46	37.40%
Widow	3	2.44%
Total	123	100%

In STI group out of 123 cases 74(60.16%) cases were married. 46(37.40%) cases were unmarried and 3(2.44%) were widows as shown in table 5.

Table 6: Marital status wise distribution of HIV positive cases

Marital status	STI group	
	HIV positive	Percentage
Married	8	88.89%
Unmarried	Nil	Nil
Widow	1	11.11%
Total	9	100%

In STI group out of 9 HIV positive cases 8(88.88%) cases were married and 1(11.11%) was a widow as shown in table 6.

Table 7: Incidence of HIV positive cases among STI group

Sr.no	STI group	Total number	Percentage	HIV positive	percentage
1	Condylomaaccuminata	29	23.5%	4	13.79%
2	Herpes Progenitalis	25	19.5%	2	8%
3.	Gonorrhoea	10	8.13%	-	-
4.	Primary syphlis	14	11.3%	1	7.14%
5.	Secondary Syphlis	9	7.31%	-	-
6.	Balanoposthitis(candidial)	8	6.5%	2	25%
7.	Venereal Scabies	8	6.5%	-	-
8.	MolluscumContagiosum	5	4.8%	-	-
9.	Chancroid	4	3.2%	-	-
10.	Vulvovaginitis	3	2.44%	-	-
11.	Non gonococcal urethritis	8	6.5%	-	-
	Total	123	100%	9	7.32%

Out of 123 cases of STI group, 29(23.5%) cases had Condyloma accuinata, 25(19.5%) cases had Herpes Progenitalis, 23(18.69%) cases had Syphilis, 10(8.13%) cases had Gonorrhoea, 8(6.5%) cases had Candidial Balanoposthitis, 8(6.5%) cases had Venereal Scabies, 8(6.5%) cases had Non Gonococcal urethritis,5(4.8%) cases had genital Molluscum Contagiosum, 4(3.2%) cases had Chancroid and 3(2.44%) cases had Vulvovaginitis.

In STI group out of nine HIV positive cases 4(44.44%) had Condylomaaccuminata, 2(22.2%) had Candidial balanoposthitis, 2(22.22%) had Herpes Progenitalis and 1(11.11%) had Primary Syphilis.

Discussion

In India, HIV seropravelence among STI patients varied from 0%-32%. In Kanpur the HIV seropositivity among STI cases was 0%[3], in Tirupati 0%[4], Gorakhpur 7.9%[5], Pune 23%[6] and 32% in Mumbai[6]. Kulkarni et al[7] (1992) found HIV seroprevalance varying from 20-30% in patients attending STI clinic at Mumbai. Bedi (1994)[8] studied 250 cases of genital ulcer disease at Delhi and HIV seroprevalaence was found to be 4.1%.

Out of total 2330 patients, 516 patients with STI i.e 22.14% were analysed[9]. Frequency of different STIs observed in order was Herpes Progenitalis (21.89%), Syphilis(16.27%), Chancroid (11.82%) and Granuloma inguinale (7.55%), Gonoccoccal urethritis and genital warts(3.87% each).LGV was found in 0.58% of cases, HIV infection in 3 cases only(0.56%). Other miscellaneous conditions like Candidiasis (13.75%), Trichomoniasis (2.7%) and Molluscum (2.14%) were responsible in 18% as a whole and non specific infection in 14%.Most of the patients were married, were from low socio economic status and there was a male preponderance with a peak age between 20 to 30 years.

In our study, in STI group the age incidence was consistent with the findings reported in similar studies where it has been observed that 56% of 89 cases at Tirupati were between 21-30 years of age[10],78% of 14 HIV positive cases were between 15-25 years of age at Vellore .Sex incidence was consistent with trends observed in other countries where the male to female ratio among HIV infected persons has begun to equalize. Infected men now outnumber the infected women by 2:1 instead 6:1.In India to the epidemic continues to shift towards the women[11].

In the current study rural group contributed to 88.88% of HIV positivity in STI cases. This is because the region of Punjab in which the study was conducted is primarily rural and a big percentage of population live in villages. This trend is also indicative of fact that in our country HIV infection is spreading from urban to rural areas[11].

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References

1. Merson MH. Slowing the spread of HIV: Agenda for the 1990s.Science 1993; 260: 1266-8.
2. Italia YM,GiladsIS.Fast rising rural spread of HIV-1 in Tribal belt of South Gujarat. Abstract Book: The 2nd International Conference on AIDS in Asia and The Pacific. 1992;Abstract No. B.316:75.
3. Jain R, Chandra S, Sakhuja S et al. HIV seropositivity in STD patients(letter). Ind J Dermatol, Venerol and Leprol 1997;63:72-3.
4. RamakrishnaihY, Babu VS,Lakshmi N etal.Clinical profile of STD clinic patients seropositive for HIV antibodies. Ind J Sex Transm Dis 1989; 10:65-7.
5. Kumar P, Kiran S, MukhijaRD. Prevalance of HIV among STD patients at Gorakpur.Ind J Sex Transm Dis 1996;17:71-72.
6. Khanna N. The current state of HIV/AIDS epidemic in India. Ind J Sex Transm Dis 1997; 63:72-73.
7. Kulkarni MG, Koppikar GV ,Mehta PR etal. Seroprevalence of HIV infection in Bombay. Abstract Book: The 2nd International Conference on AIDS in Asia and The Pacific. 1992: Abstract No.B321:77.
8. Bedi BMS. Study on genital ulcer disease and its association with HIV and HBV infection at Delhi. Abstract Book: VII International Congress of Dermatology 1994; 132:29.
9. Mohanty J, Dass KB, Mishra C. Clinical profile of sexually transmitted diseases in Cuttack. Ind J Dermatol, Venereol Leprol 1995; 61: 143-4.
10. Ramakrishnamiah Y. Prevalence of sexually transmitted infection and HIV infection in and around Tirupati among risk group. Abstract Book: The 2nd International Conference on AIDS in Asia and the Pacific. Abstract No.A.410, P.32,November 1992.

11. Park K.AIDS. In: Textbook of Preventive and Social Medicine, edited by Park K,16th Edition, Banarsidas Bhandot Publisher, Jabalpur, 2000:257-66.

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