

## Original Research Article

# A study of clinical course and therapeutic response of sexually transmitted infections in people living with HIV/AIDS

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### ABSTRACT

**Background:** Human immunodeficiency virus (HIV) continues to be a major public health problem worldwide. Once a person is infected with HIV, the manifestations of other infections and diseases are altered due to waning of the host immunity.

**Methods:** This study was carried out in HIV reactive patients in Command Hospital, Pune. The types of sexually transmitted infections (STIs) in those patients and the response to therapy were studied in detail. The statistical data was expressed as number and percentages.

**Results:** In this study, 52 people living with HIV/AIDS (PLWHA) who were having various STIs were included. Majority of the patients in this study belonged to the age group of 20-34 years (75%). The most common STIs encountered were condyloma acuminata (38.45%) followed by syphilis (30.77%), lymphogranuloma venereum, herpes genitalis, chancroid, molluscum contagiosum, gonorrhoea and granuloma inguinale. Resistance to antimicrobial therapy at the standard dosage, requirement of higher dosage, resistance and relapse of infections were observed in the patients with PLWH.

**Conclusions:** Several STIs coexisted with HIV infected patients. Unusual clinical presentations, clinical course and treatment failure in STI were common in HIV infected individuals. Hence all STI patients should be screened for HIV and vice-versa.

**Keywords:** Sexually transmitted infections, HIV, Coexistence

### INTRODUCTION

Sexually transmitted infections (STIs) are diseases that spread from one person to another through the act of sexual contact. More than 30 different bacteria, viruses and parasites are known to be transmitted through sexual contact.<sup>1</sup> Human immunodeficiency virus (HIV) continues to be a major global public health problem. Once a person is infected with HIV, there is waning of the host immunity especially the CD4 T lymphocytes, which makes them more susceptible to other infections.<sup>2</sup>

There is also altered behavior in the manifestations of other STIs in people living with HIV/AIDS (PLWHA) due to impaired host immunity. Thus we performed a study to assess the clinical course and therapeutic response of STIs in PLWHA.

### METHODS

The study was carried out on PLWHA patients admitted in STD and HIV centre and patients attending Out Patient Department of Command Hospital (Southern Command)

Pune with effect from January 1994 to December 1995. Those who did not consent to participate in his study were excluded.

A detailed history including onset and progression of lesions, history of premarital and extramarital sexual exposures, blood transfusions, intravenous drug abuse, tattooing, operations, homosexuality and other risk factors were recorded.

Complete examination of the patient including general, systematic examination was done in all the patients. A detailed dermato-venereological examination was done. Relevant investigations were performed in all the patients according to the STI they present with. Enzyme linked immunosorbent assay (ELISA) was done to detect HIV patients and it was confirmed by doing western blot test. The patients were treated according to the type of STI they present with. The response to the therapy in the STIs was monitored. Statistical data was presented as number and percentages.

**RESULTS**

In this study, 52 PLWHA who were having various STIs were included. The majority of the patients belonged to the age group 20-29 years (55.76%). Only two patients (3.85%) were female in this study. Majority of the patients were married (n=36, 71.15%). Most of the married men were staying away from their family. All the patients in the present study had premarital or extramarital sexual exposure. Heterosexual exposure was the commonest (96.15%). Only 11.55% patients had used condoms. About 30.77% patients were under the influence of alcohol during the sexual exposure.

In this study, the most common STIs were condyloma acuminata (38.45%) followed by syphilis (30.77%), lymphogranuloma venereum (LGV), herpes genitalis, chancroid, molluscum contagiosum, gonorrhoea and granuloma inguinale (Table 1).

**Table 1: Pattern of sexually transmitted infections in PLWHA.**

STIs	No. of patients (N)	%
Condyloma acuminata	20	38.45
Syphilis	16	30.77
Lymphogranuloma venereum	08	15.38
Herpes genitalis	07	13.45
Chancroid	06	11.56
Molluscum contagiosum	03	5.76
Gonorrhoea	02	3.85
Granuloma inguinale	01	1.93
Total	63	100

Total number of patients with STIs exceeds the number of patients included in this study as 15 patients (28.85%) had multiple STIs. Most common clinical presentation of

the patients was sore in the penis (32.63%) followed by swelling in the groin (19.23%). Many patients were asymptomatic especially those with genital warts, latent syphilis and neurosyphilis. They were detected to be having STI/HIV infection on investigation for some other symptoms or on screening for blood donation. One patient was diagnosed to be reactive for HIV following the detection of HIV in his wife during her ante-natal checkup.

The patients with syphilis predominantly presented in secondary stage (31%) followed by primary stage (25%), late latent, early latent syphilis and neurosyphilis. Two patients who presented with secondary syphilis were found to have primary chancre on the genitalia (Table 2).

**Table 2: Distribution of patients as per various stages of syphilis.**

Stage of syphilis	No. of patients (N)	Percentage (%)
Primary	04	25
Secondary	05	31.25
Early latent	02	12.50
Late latent	03	18.75
Neurosyphilis	02	12.50
Total	16	100

All patients with primary and secondary syphilis responded well to treatment with penicillin. But one patient progressed to develop neurosyphilis during follow up. One out of 16 patients developed Jarisch-Hexheimer reaction after penicillin injection. Two patients were allergic to penicillin and were treated with capsule tetracycline.

Resistance to the usual antimicrobial therapy was observed in 2 patients with chancroid, 2 patients with LGV and a patient with granuloma inguinale. Extended duration of therapy was required in patients with LGV. Patients with condyloma acuminata had extensive lesions and recurrences were frequent. Herpes genitalis were persistent, extensive and recurred more frequently in these patients. Molluscum contagiosum was treated with electrosurgery and chemical cautery. They recurred in all three patients.

**DISCUSSION**

STIs increases the risk of transmission and acquisition of HIV in an individual.<sup>1,2</sup> In this study, the main emphasis was to screen the STIs encountered in patients diagnosed to be HIV positive and to assess the response of the STIs to the therapy. Majority of the patients in this study belonged to the age group of 20-34 years (75%) since this represents the age of maximum sexual activity. Only 2 patients (3.85%) were female in the present study since the Command Hospital is frequented by male defense personnel.

In the present study, only 11.55% patients used condoms. Several studies have shown effectiveness of condoms in reducing the transmission of STIs.<sup>3</sup> The instructions towards proper usage of condoms also need to be followed. The low proportion of condom usage is due to the study being conducted during the time when awareness regarding condom usage was not much.

There was persistence of primary chancre and rapid progression to secondary syphilis observed in 2 PLHWA patients. This was similar to the finding of Hutchinson et al.<sup>4</sup> Faster progression to tertiary syphilis is also observed in patients with PLHWA. Thus unusual presentation of syphilis is possible in patients with PLHWA as observed in other studies.<sup>5-7</sup>

Resistance to antimicrobial therapy at the standard dosage, requirement of higher dosage, resistance and relapse of infections were observed in the patients with PLWH. This is similar to the observations in the other studies.<sup>8-10</sup>

## CONCLUSION

Several STIs coexisted with HIV infected patients. Unusual clinical presentations, clinical course and treatment failure in STI were common in HIV infected individuals. Hence all STI patients should be screened for HIV and vice-versa. The STIs in PLHWA is to be adequately treated, counselled and to be followed up for longer duration. Safe sex and usage of barrier contraception are to be reinforced.

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