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## Male preponderance in HIV seropositive patients with mucocutaneous complaints in a tertiary care hospital in North India

Shivani Sharma\*, Karan Jeet Pal Singh Puri, Mankesh Lal Gambhir

Govt Medical College, Amritsar, Punjab, India

### PEER REVIEW

#### Peer reviewer

Dr. Pallav S Kishanpuria, MBBS, MD (Skin and Venereal Diseases), Faculty, Senior Resident, Deen dayal upadhyay hospital, New Delhi, India

#### Comments

In India women, in most of the cases, get infected from their spouses, who have acquired infection through extramarital sexual contact. Thus this information can be used to initiate measures to counsel the male partners about their high risk behavior and thus reduce the risk of transmission of HIV infection to their spouses

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### ABSTRACT

**Objective:** A panorama of mucocutaneous manifestations is seen at every stage of HIV. This study was done to study the sex prevalence in HIV/AIDS patients with mucocutaneous disorders.

**Methods:** A total of 1000 HIV seropositive patients attending Skin–STD clinic, Govt. Medical College, Amritsar, for any dermatologic complaints were studied in respect to the sex group preponderance.

**Results:** Males constituted the majority as 75.6% while females were 24.4%.

**Conclusions:** Women, in most of the cases, get infected from their spouses, who have acquired infection through extramarital sexual contact. HIV infection in female patients increases the risk of HIV transmission to neonates and infants, thus further spreading the HIV in a community. So it is very crucial to initiate early preventive measures to reduce HIV burden.

### KEYWORDS

HIV, Sex, Mucocutaneous manifestations

## 1. Introduction

Among young people, HIV spreads almost exclusively in two ways: unsafe sex *e.g.* heterosexual and males having sex with males and sharing injecting drug equipment. Multiple sexual partnerships have long been recognised as an important factor contributing to the global HIV epidemic, especially in regions such as sub-Saharan Africa where sexual intercourse is the main mode of HIV transmission<sup>[1]</sup>. This study was done to study the sex prevalence in HIV/AIDS patients with mucocutaneous disorders.

## 2. Materials and methods

For the present study, 1000 HIV and AIDS patients with skin diseases visiting the department of dermatology, Venereology and Leprosy, Guru Nanak Dev Hospital attached to Government Medical College, Amritsar were studied.

After taking informed consent, their detailed clinical history which included history of socio–demographic profile of the patients, premarital or extra marital sexual contact, presenting symptoms, blood transfusion, injections, surgery and organ transplantation was taken.

\*Corresponding author: Dr. Shivani Sharma, Resident Govt Medical College, Amritsar, Punjab, India.

Tel: 9015124238

E–mail: drshivani47@yahoo.com

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A thorough general physical examination, systemic examination and mucocutaneous examination was conducted. Investigations for *e.g.* venereal disease research laboratory (VDRL), skin biopsy, KOH examination, smear for candida, Tzanck smear, culture and sensitivity of discharge, smears for *N. gonorrhoea* were done whichever was indicated. The data thus obtained was compiled and was analyzed statistically.

### 3. Results

Among the 1000 study cases, the majority of cases were males 756 (75.6%) while females were 244 (24.4%) in number. The ratio of male to female patients was 3:1 (Figure 1).

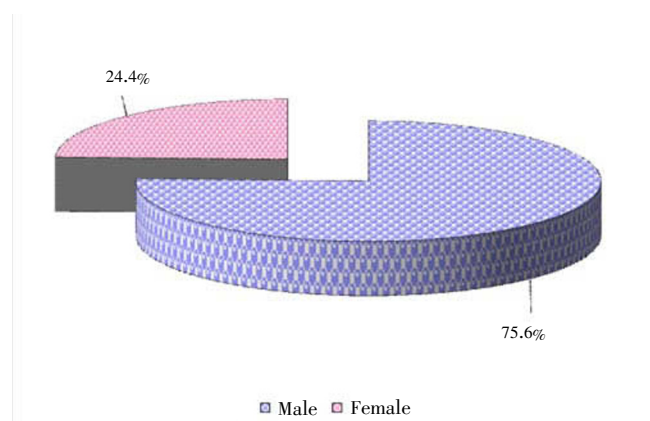


Figure 1. Showing sex wise distribution.

### 4. Discussion

According to Shobhana A *et al.* study to find mucocutaneous manifestations in HIV infection, male to female ratio was 2.5:1[2]. Ranganathan *et al.* conducted a study on 1000 patients in South-India in which males were 774(77%) and females were 226(22%)[3]. Sharma *et al.* conducted a study in Manipal on 101 patients to find out positive predictive value of oral lesions in HIV. In this study males were 73(72.9%) and females were 28(27.1%)[4]. All these studies showed results which are similar to our study.

In contrast to our study, the study conducted by Jindal *et al.* in India to find out HIV seroprevalence and HIV associated dermatoses among patients presenting with skin and mucocutaneous disorders, male to female ratio was 0.9: 1[5]. In the study conducted by Paudel *et al.* to find out the socio-demographic profile of HIV positive patients at Seti Zonal hospital, among 1099 patients 54.2% were females

and 45.8% were males[6].

Women, in most of the cases, get infected from their spouses, who have acquired infection through extramarital sexual contact. Some individuals are HIV-positive prior to entering into a stable partnership, which, in turn, places their partner at risk of becoming infected with HIV. Other individuals become infected with HIV through engagement in concurrent sexual partners within their stable relationship or through their partner's engagement in concurrent sexual partners. In some settings, marriage has been found to be associated with HIV infection among adolescent and adult women and men[7-9]. In a study conducted in two high HIV prevalence cities in Kenya and Zambia, it was estimated through deterministic modelling that at least 25% of HIV infections among married men were from concurrent partners outside of marriage[7].

A study was done to assess the current behaviour, practices and understanding of HIV/AIDS among women in Pune, Maharashtra. The group of wage earning women showed very poor knowledge of HIV/AIDS and their knowledge was restricted to the sexual mode of transmission of the infection and use of condoms to prevent the infection. The young girls were embedded in the culture of silence and associated with a lot of shame to open discussion about AIDS[10].

The low numbers (24.4%) of female is not a true representation of the proportion of females infected with HIV/AIDS. This is because fewer females attend the HIV clinics because of financial constraints, gender bias, neglect lack of decision making power and social stigma attached with the disease. Women are biologically more susceptible to HIV infection than men. Women are also at increased risk of receiving blood and blood products as a consequence of their childbearing role. Poverty, lack of education and limited earning opportunities often propel women to commercial sex, significantly increasing their risk of infection. Men's unwillingness to use condoms further accentuates women's risk. Women, in most of the cases, get infected from their spouses, who have acquired infection through extramarital sexual contact. The prevalence of HIV infection among females also reflects the vulnerability of the women to HIV infection and dominance of men in the Indian society.

HIV infection in this group of patients increases the risk of HIV transmission to neonates and infants, thus further spreading the HIV in a community. So it is very crucial to initiate early preventive measures to reduce HIV burden.

## Conflict of interest statement

We declare that we have no conflict of interest.

## Acknowledgements

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## Comments

### Background

This study was done to study the sexual preponderance in 1000 HIV positive patients with skin diseases presenting to the Dermatology department of a tertiary care hospital in North India.

### Research frontiers

Demographic factors of HIV and AIDS infection in an area or a group of population include sexual preponderance, age distribution, routes of transmission, occupation of the patients, etc. These features are useful in understanding the disease and taking steps to reduce further spread of infection.

### Related reports

Rangnathan *et al.* conducted a study on 1000 patients in South-India in which males were 774 (77%) and females were 226 (22%). In contrast, the study conducted by Jindal *et al.* in India to find out HIV seroprevalence and HIV associated dermatoses among patients presenting with skin and mucocutaneous disorders, male to female ratio was 0.9:1.

### Innovations and breakthroughs

This study studies demographic characteristics in 1000 HIV and AIDS patients with skin diseases visiting the department of Dermatology, Venereology and Leprosy, Guru Nanak Dev Hospital attached to Government Medical College, Amritsar were studied.

### Applications

HIV infection in female patients increases the risk of HIV transmission to neonates and infants, thus further spreading the HIV in a community. And it is very crucial to initiate early preventive measures to reduce HIV burden.

## Peer review

In India women, in most of the cases, get infected from their spouses, who have acquired infection through extramarital sexual contact. Thus this information can be used to initiate measures to counsel the male partners about their high risk behavior and thus reduce the risk of transmission of HIV infection to their spouses.

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