

A STATISTICAL STUDY OF HIV POSITIVE FEMALES WITH HIV POSITIVE AND HIV NEGATIVE PARTNERS AND KEY FACTORS IN TRANSMISSION



Gynaecology

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ABSTRACT

Introduction: More than 20 years after the beginning of the HIV pandemic, the issue of differences between males and females in HIV/AIDS remains complex and controversial. The relationships between male and female prevalence, incidence, severity, and mortality are by no means stable. Gender differences with respect to HIV/AIDS depend on patterns of disease transmission, as well as on the stage of the epidemic. They are produced by differential exposure and differential susceptibility by age and sex.

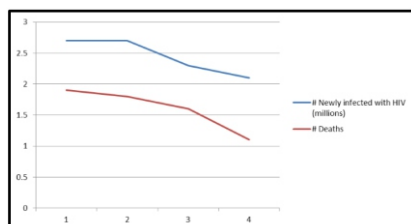
Material and method: A single centre study was carried out on patients attending the outdoor patient department of obstetrics and gynecology in Maharani Laxmi Bai Medical College, Jhansi. In this study 40607 patients were tested for HIV and risk factors responsible for transmission from female to male were studied.

Result: 29.1% of HIV positive females with HIV negative partners had this infection through blood transfusion for either cause. In 23.9% cases HIV negative partners had regular use of condoms which is infrequent in case of HIV positive partners.

Conclusion: This study was found is most of the patient of HIV is transmit the infection through the blood transfusion.

INTRODUCTION: India ranks third in gross HIV/AIDS population (after Nigeria and South Africa). However, India has less significant percentage of population of HIV/AIDS, ranking 89th worldwide with 30% prevalence rate. In 1986, Dr. Suniti Solomon diagnosed the first HIV/AIDS case in the city of Chennai, in a female sex worker. In 1987, the government established the National AIDS Control Program (NACP) to restrict HIV from spreading and to promote national efforts against HIV/AIDS. Examples of effort include screening of blood samples and health education.

Worldwide trend of HIV				
YEAR	2009	2010	2012	2015
# Newly infected with HIV (millions)	2.7	2.7	2.3	2.1
# Deaths	1.9	1.8	1.6	1.1



Out of these, 1.93 lakhs new HIV infections in 2015 and the number of deaths due to HIV/AIDS was 1.3 lakhs. Number of patients receiving ART treatment in India stood at 25.82% as compared to the global average of 41%.

Transmission Trends: The trends indicate that HIV infection is spreading in 2 ways:

1. From urban to rural population: Individuals practicing high behavior to general population. The Government of India established the National AIDS Committee in 1986, which set the foundation for National AIDS Control Organisation (NACO).

2. Screening: The centers for disease control & prevention (CDC) estimates that approx. 40000 – 50000 new HIV infection occurred annually in VS from 2006 to 2009. Almost 1 in 5 of the entire population infected with HIV is unaware of their HIV status.

In order to identify individuals with undiagnosed HIV infection, the CDC recommends HIV screening for all patients aged 13-64 years in health care settings & older women with risk factors. Repeat HIV testing should be offered at least annually to the women who

- Are injection drug users

- Are sex partners of injection drug users
- Exchange sex for money
- Are sex partners of HIV infection persons
- Have had more than one sex partner since their most recent HIV test.

Women have higher risk of getting HIV from vaginal sex

Women are more likely to get HIV during vaginal sex than men due to:

- Vagina has larger area (compared to penis), that can be exposed to HIV infected semen.
- Semen can stay in vagina for days after sex, while men are only exposed to HIV infected fluids during sex.
- Having untreated STI makes it more likely for a person to get HIV. Small cuts on skin of vagina are hard to notice but may allow HIV to pass into a woman's body

Women can pass HIV to their partners

More likely to pass the virus if:

- You have a vaginal yeast infection or STI
- Had been recently treated for a vaginal yeast infection or STI
- Were recently infected with HIV
- Partner has an infection or inflammation.

Material and Methods: In this study 40607 patients attending outdoor clinics in MLB medical college, Jhansi from 2011 to May 2016 were tested for HIV and risk factors responsible for transmission from female to male were studied. Several studies have examined the risk of sexual transmission of HIV from infected men to their female partner. HIV prevalence among female partners of infected men range from 15-30% in most studies from Europe and US. In addition to unprotected vaginal intercourse & sex & advanced clinical or immunological stage of HIV infection in men have shown to significantly increase risk of transmission. Since many more men are infected with HIV than women in more developed countries, transmission from infected woman to their male partners have been poorly studied. This is the study to compare female to male transmission.

The factors studied are:

- Modes of Infection
- Duration of infection
- Contraceptive Measures
- CD4 Count

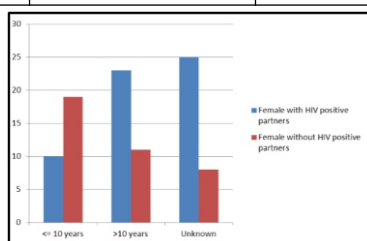
40607 patients tested out of which 96 HIV positive patients were found.

Mode of infection of index (5 years)**Table.1**

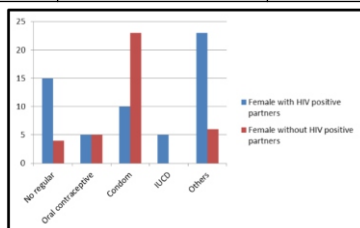
	Female with HIV positive partners	Female without HIV positive partners
IV drug abuse	Nil	Nil
Transfusion recipient	19	28
Previous marriage	8	10
Hemophilic patient	Nil	Nil
Homo sexual contact	Nil	Nil
Others	31	0

Duration of infection (months)**Table.2**

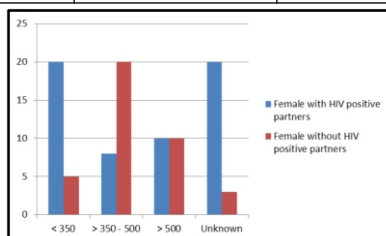
	Female with HIV positive partners	Female without HIV positive partners
<= 10 years	10	19
>10 years	23	11
Unknown	25	8

**Contraceptive Measures****Table.3**

	Female with HIV positive partners	Female without HIV positive partners
No regular	15	4
Oral contraceptive	5	5
Condom	10	23
IUCD	5	Nil
Others	23	6

**CD4 count****Table.4**

	Female with HIV positive partners	Female without HIV positive partners
< 350	20	5
> 350 – 500	8	20
> 500	10	10
Unknown	20	3



RESULT: In this study the results are; out of 96 Infected patients, 38 females were HIV positive with HIV negative partners and 58 were HIV positive with HIV positive partners. 29.1% of HIV positive females with HIV negative partners had this infection through blood transfusion for either cause. In 19.7% of the patients, HIV positive with HIV negative partners had the infection for short duration of <10 years. In 23.9% cases, HIV negative partners had regular use of

condoms which is infrequent in case of HIV positive partners. In 20.83% cases with HIV positive partners, CD4 count was less than 350 which shows strong correlation.

CONCLUSION: From the above study, one can conclude that every single act of unprotected intercourse with HIV infected person exposes the uninfected partner to risk of infection. In India sexual transmission is responsible for 87.4% of reported HIV cases. Since India lives in a conservative society and having more than one sex partner is considered a taboo, disclosure of high risk behavior is difficult to elicit from serodiscordant HIV infected women. Although the cause of discordance remains unknown in maximum, 29% was related to blood transfusions. Further the increasing awareness is leading to decline in HIV infection and also in discordance.

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