

IMPACT OF HIV / AIDS ON INDIAN WOMEN

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Introduction

AIDS is caused by the HIV virus, the Human Immunodeficiency Virus. Most of the people get the HIV virus by having sexual intercourse with an infected person, sharing of syringes used by an infected person. Some are also born with the disease where the mother transmits during delivery or when the baby is breast fed by an infected woman. AIDS affects every person differently, some people die soon after infection, some live normally for many years after "officially" having AIDS. Some HIV -positive people also stay healthy for many years even without taking anti-HIV medications. A normal, healthy person has 500 -1500 CD4+ cells in every milliliter of blood, if anyone has less than 200 CD4+ cells or percentage is less than 14%, the person is said to have AIDS.

Problems Faced By a HIV Positive Women

HIV infections of women are rising, while almost half of Indian women have not even heard of AIDS. Human development and HIV are very closely related. Social and economic insecurity can play a great role in increasing vulnerability to HIV.

People living with HIV have faced violent attacks; been rejected by families, spouses and communities; been refused medical treatment; and even, in some reported cases denied the last rites before they die. This discrimination is hindering efforts to prevent new infections. While such strong reactions to HIV and AIDS exist, it is difficult to educate people about how they can avoid infection. Discrimination is also alarmingly common in the health care sector.

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Negative attitudes from health care staff have generated anxiety and fear among many people living with HIV and AIDS. As a result, many keep their status secret. For many reasons, women with HIV may avoid testing and care. Often, women may be stigmatized and endure discrimination because of their HIV status. Women are often the primary caregivers for other family members, which may lead to avoiding or delaying testing and care. Economic dependence on a spouse or significant other may also play a role in whether a woman seeks testing and care. Mistrust of the healthcare system may also exist. Depression or domestic violence may also affect a woman's ability to seek needed care for HIV infection.

The HIV epidemic has reached an important threshold in India. India has the world's second largest burden of HIV -infected persons. One of every six new HIV infections occurs in India. Two Indians become HIV -infected every minute and this is expected to exacerbate a number of other important public health problems in India. In India, AIDS is often seen as "*someone else's problem*" - as something that affects people living on the margins of society, whose lifestyles are considered immoral. Even as it moves into the general population, the HIV epidemic is misunderstood and stigmatised among the Indian public. Psychological and sociocultural needs, including substance abuse and mental health problems. Women living with HIV have a high incidence of mental health problems and report greater levels of psychological distress than their male counterparts. Psychosocial distress not only impedes the quality of one's social and emotional life but also is associated with poorer physical functioning: AIDS-related death, for example, is more common among HIV -positive women who report chronic depressive symptoms. Household incomes of HIV / AIDS sufferers are depleted by one third, while average monthly expenditure on food and treatment increases substantially. As a result of reduced income and increased expenditure, these households have to compromise on their children's education. Many withdraw their children from school and send them to work. Many HIV positive persons depend on the income from a regular job. But prevailing stigma and discrimination at the workplace complicate the matter that many do not disclose their status to employers for fear of losing their jobs. The increase of HIV/AIDS amongst women is just another

example of women's unequal status in society. The way in which women in our society are treated, especially women living with HIV/AIDS. These women are either shunned by the family and community or are forced to live on the edge of society after their husband's die of AIDS. Nearly 40 percent of the 5.2 million HIV positive people in India are women and nearly 80 percent of them have contracted this infection' from their husbands or partners. Almost 90 percent of these positive women are thrown out of their homes after their husbands die of AIDS. While the general public continues to believe that most women with HIV / AIDS are sex workers, official numbers indicate that they make up less than one percent of the 2 million female infections. With nearly 14,000 people becoming newly infected with HIV each day, accelerating the timetable towards a vaccine must be a global health and development priority of the highest order.

Women's Susceptibility to HIV

Women face specific risks for transmission that, compared with men, place them at greater risk for acquiring HIV infection from a single exposure to HIV - infected blood or semen.

- The female genital tract has greater surface area than the male genital tract, resulting in significant mucosal exposure to seminal fluids during intercourse. Moreover, HIV is more highly concentrated in semen than in vaginal fluids, and a larger amount of semen than vaginal fluids is involved in intercourse.
- In an effort to avoid pregnancy and condom use, many couples engage in anal sex, a highly risky behavior.
- Unwanted sex increases the potential for lesions in the vagina or anus, which provide an entry for the virus into the system.

Women often have sexually transmitted infections that go untreated, increasing the likelihood of HIV infection. Infection often occurs because women are unaware that their partners are engaging in high-risk behaviors. Lack of treatment results when women do not know that they have an infection or have no

or poor access to care.

- In young women, the cervix is not mature and is more vulnerable to infection.
- These unique characteristics have spurred a search for chemical, biological, and physical barriers that can be used intra -vaginally or intrac tably to inactivate HIV and other microorganisms.

Imagine a World Without A IDS

International AIDS Vaccine Initiative in partnership with the Ministry of Health and Family Welfare are trying for Vaccine production. Government of India and the Indian Council of Medical Research (ICMR) since December 2000 evaluate AIDS vaccine candidates appropriate for use in India.

Challenge for Scientists

Right now there is no cure for AIDS but scientists are working very hard to produce an affordable cure for AIDS. There are drugs (AZT & Nevrapine) available that can slow down the damage done to the immune system through the HIV virus. But the real fact is that there is no way to get all of the HIV out of the body

Developing a vaccine against HIV is a very difficult chal lenge for scientists. There are many reasons for this, including:

- Nobody has ever recovered from HIV infection, so there is no natural mechanism to imitate
- HIV destroys the immune system cells that are meant to fight against it
- Soon after infection, HIV inserts its genetic material into human cells, where it remains hidden from the immune system
- HIV occurs in several subtypes each of which is very different from the others

There are no good animal models to use in experiments.

Phase I Trial

Phase I trials in India and in other countries is a part of a multi-centre Phase I AAV-based AIDS vaccine clinical trial being conducted in four European sites, two each in Belgium and Germany and also in Pune.

AAV is a non-pathogenic virus in humans. It does not induce disease. It naturally infects about 60 per cent of humans in Europe and Northern America. We do not know yet what percentage of the Indian population is naturally infected by this virus and has antibodies against AAV. Hence, the neutralizing antibodies against AAV will be tested in the trial. The trial duration for each volunteer is 18 months. It is a clinical trial involving small number (around 60) of healthy volunteers. These people would be HIV negative and typically belong to low-risk category for HIV infection. Phase I trials test a vaccine's safety in humans, including its metabolic and pharmacologic actions and any side effects seen with increasing doses.

Problem with Using Macaques in Vaccine Research

The most fundamental problem with using macaques (Monkey) in vaccine research is the fact that they have different immune systems to humans. This means they can be infected with SIV, or an SIV-HIV combination ('chimeric' virus) known as SHIV, but not with HIV-1 (although they are susceptible to certain strains of HIV-2). A drug or vaccine that is effective in Rhesus monkeys infected with SIV or SHIV may not therefore be effective in humans with HIV. Conversely, a drug or vaccine that may be effective in a HIV positive human may be dropped because it appears ineffective in animals. Indeed, no HIV vaccine has yet been developed, despite many years of animal involvement.

Vaccines either help to prevent infection, or help to prevent or delay illness in people who are already infected. A vaccine is not the same thing as a cure for AIDS. But there is still no vaccine against HIV, the virus that causes AIDS.

Microbicide

A microbicide is something designed to destroy microbes (bacteria and viruses) or to reduce their ability to establish an infection. A microbicide for preventing HIV infection would be applied to the vagina or rectum to prevent the virus being passed on during sex. It is quite possible that a HIV microbicide could be available sooner than a AIDS vaccine - perhaps even as early as 2010.

Few people have some kind of natural resistance to HIV infection, meaning they never become infected despite repeated exposure to the virus. These facts suggest that the immune system can be quite effective at controlling HIV. People born with changes in both copies of a gene, called CKR5, seem to have a natural resistance to HIV -1 infection.

Before we conclude, we would like to supplement the presentation by giving three thought provoking tips to prevent AIDS/HIV .

- If men and women comes to know that they are HIV positive before marriage they should never get marry.
- If they get to know, they are HIV positive after marriage, unnecessary pregnancy to be avoided.
- Parents, when looking for perfect match for their son/daughter, instead of depending on the horoscope they should better go for a master health check - up of bride and groom.

Conclusion

In theory, if everyone abstained from sex, or remained faithful to one partner and always used condoms, and nobody injected drugs, then HIV and AIDS might be eradicated. However, in the real world behaviour change and condoms alone will not eliminate the virus; they will only help to control its spread.