

FREQUENCY OF RISK FACTORS FOR TRANSMISSION OF HIV/AIDS

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ABSTRACT

Background: Pakistan is considered a low prevalence but future high risk country for human immunodeficiency virus infection. The objective of this study was to find out the risk factors for transmission of HIV infection.

Material & Methods: This descriptive study was carried out from February 2008 to July 2011 at Anti Retroviral Centre, Kohat. All 65 HIV positive patients were interviewed after informed consent.

Results: A total of 65 patients suffering from HIV/AIDS were interviewed; 47(72%) males and 18(28%) females. The mean age was 41 years. Five males and 3 females were unmarried; the rest 57 were married. Regarding education, 2 patients were having primary and one middle level education, the rest were uneducated. Regarding transmission, 40(61.54%) had heterosexual transmission, 4(6.20%) were of mother to child transmission, one had history of dental procedure before contracting infection while 4 had a previous history of blood transfusion. No homosexual or transgender transmission was reported. Out of 40 heterosexual transmissions; 24 were from sex workers, 15 from husband to wife and one from wife to husband. Regarding addiction, 21(32.3%) using oral snuff addiction, 2(3.1%) hashish, 2(3.1%) smokers, 2(3.1%) were injection drug users and the rest had no addiction. Out of 65 cases, 57(87.7%) did not have history of sexually transmitted infections, whereas 8(12.3%) had no such history.

Conclusion: Heterosexuality is the most common mode of transmission and sex with a sex worker is the most common risk factor for HIV/AIDS transmission in our set-up, while mother to child and injectable drug abuse are the next common risk factor.

KEY WORDS: HIV, AIDS, Risk factors.

INTRODUCTION

The first case of Acquired Immunodeficiency Syndrome (AIDS) in Pakistan was reported in 1987.¹ Pakistan is considered a low prevalence but high risk country for Human Immunodeficiency Virus (HIV) infection.² The epidemic stage can rapidly change, as has happened in other countries in the region, based on a number of vulnerabilities that also exist in Pakistan. These include increasing levels of poverty combined with low levels of literacy, especially in women, low levels of condom use for disease prevention, low levels of awareness among external migrants, and long-distance truck drivers known to engage in sexual practices that put them at risk of contracting HIV and sexually transmitted infections (STIs); widespread indulgence in commercial sex with low levels of condom use, limited safety of blood transfusion, high prevalence of STIs with limited access to good-quality STI care, extensive use and reuse of syringes without sterilization, including an increasing rate of needle-sharing among injecting drug

users, and a large proportion of young people with low levels of knowledge about HIV transmission and prevention.³

Most HIV infections identified by AIDS Control Program Pakistan are found among Pakistani workers deported from Gulf States and among foreigners.⁴ The majority of people with HIV/AIDS appear to come from low income groups and unaware about the disease. They may have acquired HIV as a result of lack of knowledge of the virus or safe sex.¹ UNAIDS latest figures estimate the number of cases bordering ninety six thousands.⁵

The objective of this study was to find out the risk factors for transmission of HIV infection in our set-up.

MATERIAL AND METHODS

This descriptive study carried out from February 2008 to July 2011 at Anti Retro Viral centre Kohat. The data was collected through a questionnaire at Voluntary Counseling and Testing (VCT)

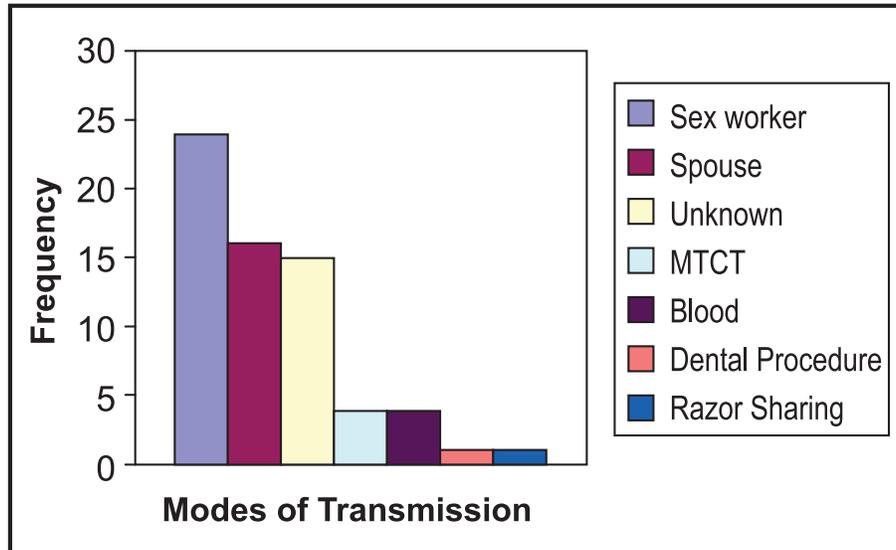


Fig. 1: Modes of transmission of HIV.

room from referred patients. The source of determination of transmission of disease was questionnaire based. Patients were interviewed by the authors and an HIV counselor in the presence of an HIV nurse.

Rapid test using Immunochromatographic techniques (ICT) for HIV was done from two different sources and positive patients were referred for ELISA. Follow-up services were provided by the center. The approval was granted by Institutional Review Board for Bioethics (IRBB) of KUST institute of medical sciences.

RESULTS

A total of 65 patients suffering from HIV/AIDS were interviewed; 47 (72%) were males and 18 (28%) females. The mean age was 41 years. Five males and 3 females were unmarried; the rest 57 patients were married. Regarding education, 2 patients were having primary education and one middle level education, the rest of the cases were uneducated.

Regarding transmission, 40 (61.54%) had heterosexual transmission, 4 (6.20%) were of mother to child transmission (MTCT), one case had history of dental procedure before contracting the infection while 4 cases had a previous history of blood transfusion. No homosexual or transgender transmission was reported.

Out of 40 heterosexual transmissions; 24 were from sex workers, 15 from husband to wife and one from wife to husband.

Regarding addiction, 21 (32.3%) gave history of oral snuff addiction, 2 (3.1%) history of

hashish, 2 (3.1%) smokers, 2 (3.1%) were injection drug users (IDU) and the rest had no addiction.

Out of 65 cases, 57 (87.7%) did not have history of STIs, whereas 8 (12.3%) had history of STI. (Figure 1)

DISCUSSION

The patterns of HIV transmission in Pakistan are similar in many ways to other parts of Asia. The virus traverses the barrier from high-risk communities to the mainstream population. Once this transmission jump has occurred, the increase in HIV incidence is swift and uncontrollable. Along a similar pattern, India experienced an explosive spread of HIV/AIDS in the early 90s.⁶

An important factor that has emerged in the HIV epidemic in Pakistan relates to migrants working abroad who become infected either through sex or blood transfusion and are consequently repatriated due to their HIV status.⁷ More than two million Pakistani workers work in oil rich Arab countries and the majority cannot migrate with their families due to limited income or prohibitive immigration policies of the host country. Pakistani nationals working abroad in the oil-rich Gulf States are usually of low socioeconomic status and sexually active young men aged 20-40 years.^{8,9} While abroad, these men are likely to have unprotected sex with multiple partners, usually sex-workers, and sometimes with other men. Commercial sex workers in the Gulf States are typically short-term residents with a temporary tourist visa. No HIV testing is conducted on short-term visitors to the Gulf States who do not require a work permit.^{8,10} Con-

dom use or other barrier methods are rarely used by Pakistani nationals thereby increasing their chances for infection.¹¹ Having no knowledge of the disease, these poor fellows get infected and are deported without providing safety measures for prevention of infection transmission. Their wives acquire infection through them.⁴

Mujeeb & Hashmi¹² reported that during 1986-87, 1363 subjects were screened for HIV infection in Karachi, 2 were confirmed positive by Western Blot. These two were married females who had received multiple transfusions and denied other risk factors.

Khanani et al¹³ reported another 3 confirmed cases of HIV infection in a group of 413 screened individuals from Karachi in 1990. Two were foreign nationals of Tanzania and Uganda and the third was a Pakistani national residing in Saudi Arabia who had received multiple transfusions following a car accident in 1981.

In 1992 Kayani et al¹⁴ screened 47,766 serum samples. The noteworthy point in their study was none of the confirmed HIV positive patients represented indigenous case of AIDS in Pakistan. The largest group of positive patients was represented by foreigners /expatriates, individuals with frequent travel history and recipients of multiple transfusions.

The presence of a pre-existing STIs increases the risk of HIV transmission by sexual intercourse. The most common means of HIV transmission now, is heterosexual contact and if left unchecked will continue to be the main means of spread in Asia. Low prevalence of STIs in our study group may be due to the fact that our people do not notify STIs because of social constraints.

The other important mode of transmission is blood transfusion. The requirements for a safe transfusion include organized infrastructure, a continuous supply of electricity, well-educated professionals and readily available supplies of expensive equipment and reagents, resources that are all typically in short supply in developing countries.¹⁵ In United States where every blood unit is screened, the statistical incidence of transfusion associated AIDS is estimated to be 1 in 1,25000 blood donations¹⁶ Blood transfusion without proper screening is a common practice in Pakistan.¹⁵ Blood donations by HIV seropositive donors is also a problem because of illegal professional blood system which exists and most of the professional blood donors are drug abusers.¹⁷

Mother to child transmission is statistically important in our results. Majority of the deliveries in rural areas are carried out by nurses and Lady

Health Visitors who do not have the knowledge of the disease. In addition to being ignorant of modes of transmission of HIV, they also have lack of access to proper medical services. This results in reuse of contaminated syringes and instruments thereby increasing the spread of blood borne infections in the community.

One interesting case, among the group of unknown causes of HIV transmission, was a Shia Muslim with cut marks on his back. During Moharam, they share chains having small blades for mourning, and acquire the infection without having knowledge of it. One case reported razor sharing with roommates during his stay at Saudi Arabia for job. One patient reported having dental procedure in the past.

Steps taken right now will go a long way in battling HIV/AIDS. But in order to bring and sustain change on the ground, the government needs to extend its full support and participation.

CONCLUSION

Heterosexuality is the most common mode of transmission and sex with a sex worker is the most common risk factor for HIV/AIDS transmission in our set-up, while mother to child and injectable drug abuse are the next common risk factor.

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