ORIGINAL ARTICLE

MIGRANT WORKERS: A RISK FACTOR FOR HIV TRANSMISSION

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Background: HIV continues to be a threat in both developed and developing countries. Pakistan has entered concentrated epidemic from low epidemic stage. The prevalence of HIV is more in at risk population particularly intravenous drug users (IDUs). Studies are required to find out other risk factors contributing to spread of the disease in the general population in order to prevent the spread of disease among general population. **Methods:** A cross-sectional study was carried out on patients reporting for HIV testing at National HIV/STI Referral Lab, National AIDS Control Program (NACP) from January to December 2011. **Results:** A total of 345 patients reported to the lab during the study period. The detailed histories of 271 patients were available out of which 131 (48.3%) patients were found to be positive for HIV. Minimum age of patient with HIV was 2 years while maximum age was 64 years. HIV affected those more significantly who had visited abroad (p=0.000) or were IDUs (p=0.000). Extramarital sexual activity, blood transfusion, or any surgical procedure in the past was not found to be significant (p=0.574, p=0.243, p=0.252 respectively). Most of the affected males were drivers (16, 12.2%) by profession. Among them 9 had visited gulf countries and 4 of them were deported from the gulf countries having HIV. **Conclusion:** Migrant workers are a risk factor for HIV transmission. Policy may be developed to focus on this population who continues to spread HIV among their spouses and children as a result of unawareness about their HIV status and its modes of transmission.

Keywords: Migrant workers, HIV, gulf countries, deported

INTRODUCTION

HIV continues to be a threat worldwide. The number of newly infected HIV patients worldwide is decreasing since the late 1990's and there were 2.6 million newly infected cases in 2009.[1] In order to collect HIV data the government set up sentinel sites at selected centres in all provinces in 1986.[2] The data from these sentinel centres was not reliable as a result the compilation of the data at the National level was discontinued in 2011. The most common modes of transmission of HIV includes sexual contact, mother to child transmission, contaminated blood transfusion, and injecting drug use.[3]

Till now four rounds of HIV second generation surveillance has been carried out in most at risk population in different cities of Pakistan. The most at risk population includes Intravenous drug users (IDUs), female sex workers, male sex workers and *Hijra* sex workers. There is no other surveillance system in Pakistan to know the exact figures of HIV in the general population. No data exists regarding the number of deaths due to HIV. The data collected at the treatment and care centres is now compiled and relied upon for future planning. There are 17 treatment and care centres and the total numbers of registered patients in these centres was 5,256 till December 2011. It is very essential to know the prevalence of HIV among the general population and to find out the risk factors contributing to spread the disease among the general population so that affective measures could be adopted to prevent the spread of the disease. The risk factors contributing the spread of disease includes unsafe sexual practice, sharing of needles among injecting drug users, transfusion of unscreened blood, unsafe medical injection practices, and migrant workers.

There are about 4 million Pakistani workers serving in different parts of the world, and among these almost 90% are in the gulf countries.[4] Migrants constitute an important community for the spread of HIV in Pakistan. Studies are required to find out other risk factors contributing to spread of the disease in the general population.

MATERIAL AND METHODS

The cross-sectional study was carried out at the National HIV/STI Referral Lab, Islamabad during January–December 2011. A total of 345 patients reported at the National HIV/STI Referral Lab. The detailed histories of 271 patients were available. The patients were either self-reporting or referred to the lab for HIV diagnosis.

The patients were counselled after which blood was taken for screening (Vironostika Ag/Ab) after consent. Those found to be reactive on screening were confirmed by supplemental assay (New Lav Blot 1, Bio Rad). Results were given after post-test counselling. The HIV positive patients were referred to the HIV care and treatment centre for follow-up.

All persons voluntarily reporting at the centre, and undergoing testing after consent and counselling during the mentioned period were included in the study. Persons not willing for testing after counselling were excluded from the study.

The data were collected on a questionnaire and analysed using SPSS-12. Chi-square test was used for

checking the association of risk factors and demographic characteristics, $p \leq 0.05$ was considered as significant.

RESULTS

There were a total of 271 cases out of which 131 were positive, 135 negative and 5 indeterminate for HIV. Majority (185, 69.5%) of the cases were referred from a centre while 81 (30.5%) reported to the laboratory directly for HIV diagnosis. There were 202 (76%) males while 64 (24%) females, 161 married and 105 unmarried. The minimum age was 2 years and the maximum 64 years. Majority (122) of the patients were from Punjab, 78 from KPK, 32 from Islamabad Capital Territory, 19 from Azad Jammu Kashmir, 6 from Federally Administered Tribal Areas, 4 from Gilgit Baltistan, 2 from Sindh, 1 from Baluchistan, and 2 were foreigners. The risk behaviours studied included extra marital sex 77 (29%), blood transfusion 23, (8.6%), intravenous drug user 23 (8.6%), visiting a foreign country 65 (24.4%), and surgery 63 (23.7%). There were 3 patients who had history of drug abuse by the nasal route.

Among the education status (n=229), 58 were illiterate, 36 Primary, 44 Middle, 40 Matric, 16 Intermediate, 20 Bachelor, and 15 had Masters. The most common symptoms at the time of reporting to the laboratory included fever of more than 3 weeks duration 75 (28.2%), diarrhoea of more than 3 weeks duration 57 (21.4%), weight loss of more than 5 Kg 92 (34.6%), oral ulcers 44 (16.5%), and skin manifestations including itching, boils, abscess, etc. 33 (12.4%). Most of the patients (199, 74.8%) did not have past history of TB, 24 (9%) were either suffering or had suffered from TB in the past, and 43 (16.2%) were unaware of having TB. Majority of the patients were unaware of Hepatitis B or C, only 16 (6%) had a positive test for anti-HCV antibody and 4 (1.5%) were positive for Hepatitis B surface antigen. Out of the total only 8 (3%) patients had ulcerative lesion on the genitals, and 11 (4.1%) had history of discharging pus from the urethra in the past.

Eighty-three (31.2%) knew at least 2 of the modes of transmission of HIV. Regarding treatment 109 (41%) did not know whether HIV diseases was curable or not, 23 (8.6%) of the patients thought that the disease was curable. The socio-demographic characteristics of HIV positive patients are given in Table-1. The males were affected significantly more compared to females (p=0.032). It affected married individuals more compared to unmarried (p=0.015).

Twenty-five of the women tested positive had their husbands who were positive. Two women tested negative whose husbands were positive. One woman was positive whose husband was negative. Five of the children who tested positive had their both parents positive. One child was positive while her mother was also positive. Two children were positive whose fathers were positive. There was one positive mother whose child tested negative for HIV. Risk behaviours of the disease affected patients are given in Table-2. There were 2 risk factors found to be significant, HIV affected significantly who had visited a foreign country (p=0.000), 21 of the patients had history that they had been deported from the gulf countries mostly due to HIV infection. Intravenous drug users were affected more (p=0.000). Extramarital sexual activity, history of having blood transfusion, surgical procedure was not found to be significant (p=0.574, p=0.243, p=0.252 respectively).

Most (16, 12.2%) of the affected males were drivers by profession. Among these, 9 had visited gulf countries and 4 of them were deported from the gulf countries due to HIV. Out of 131 HIV positive cases, 17 (13%) had already taken antitubercular therapy in the past or were on treatment for pulmonary tuberculosis.

Table-1: Socio-demographic characteristics of HIV positive patients

Gender	
Male	92 (70%)
Female	39 (30%)
Age (Years)	
1–10	8 (6.1%)
11–20	4 (3.1%)
21–30	46 (35.1%)
31–40	40 (30.5%)
41–50	27 (20.6%)
51–60	5 (3.8%)
61–70	1 (0.8%)
Mean age	32.6±11.9
Marital status	
Married	89 (68%)
Unmarried	42 (32%)
Years of education (n=111)	
Illiterate	33 (37.2%)
Up to 5 years	22 (19.6%)
6–10 years	41 (33.3%)
>10 years	15 (9.8%)
Nationality	
Pakistani	129 (86.2%)
Foreigner	2 (13.7%)

Table-2: Risk behaviours of HIV positive patients

Practice/Behaviour	Patients
Extramarital sexual contact (n=40, 30.5%)	
With male	7 (5.3%)
With female	28 (21.4%)
With sex worker	16 (12.2%)
Intravenous drug users	22 (16.8%)
Blood Transfusion	14 (10.7%)
Travelled abroad	45 (34.4%)
Surgical procedure	35 (26.7%)

DISCUSSION

Pakistan being one of the most populous developing country in Southeast Asia continues to be surrounded by a number of problems including poverty, illiteracy, disease, failing economy, and terrorism. Provision of Health services to the population is one of the major challenges. Infectious diseases continue to be a major threat leading to increased mortality among all age groups. Pakistan is a Muslim country where extramarital sexual relationship is forbidden. There is denial about the

prevalence of HIV disease in the society. It is almost impossible to talk about sex, HIV and AIDS. The disease is a stigma. The positive patients fear to loose their job, relatives, friends, and have to leave their place of residence. There are examples where young people lost there job on being declared as HIV positive.

Most of the cases are referred for HIV diagnosis after being suspected of suffering from the disease. Some of them report directly to the laboratory for diagnosis of there status. There are many who apply for going abroad for which they have to undergo mandatory HIV testing by the authorised laboratory, and when they are found to be reactive after undergoing screening tests, are denied visa. Few of these patients report at the National HIV/STI Referral Lab without disclosure of their status or having being tested for HIV before. HIV affected male patients are more as compared to females most probably due to two reasons since the males apply for employment in the overseas as a result more of them undergo mandatory screening and because of the social norms the males are more privileged in the society compared to females and they report to the medical centres for treatment of ailments. The most affected age group was from 21–30 years, it is the most critical age group affecting the individuals who are in the reproductive and employment phase mainly who have to work and earn for the family. Majority of the drivers who were positive for HIV had visited gulf countries and some of them were deported while contacting HIV. Since HIV was found to be significantly high in those individuals who had gone abroad, especially to the gulf countries, it means that one of the major sources of spread of HIV is migrant worker. In a study[5] many of the HIV positive cases were detected in people deported from the Middle-East. These people go abroad for work and since they are away from their families, lack of awareness and aloneness may result in their indulging in extramarital sexual relationship from where they acquire HIV. There is lack of awareness and less efforts to address this high risk group of individuals. There should be a system which creates awareness and targets those individuals going abroad for employment especially at the airports. On the other hand a system should be devised where all deported HIV-positive patients who arrive at the airport should be counselled and given guidance so that they know their status and can report to the nearest HIV care and treatment centres for follow-up. This can prevent the transmission of HIV to their spouses and children. In another study[6] almost 70% of the HIV cases from the year 1986–92 were from expatriates mainly deported workers from Gulf countries.

Extramarital sexual relationship did not seem to be a significant risk factor but this may be due to the reason that the people usually hide and don't feel free to discuss their extramarital relationship. HIV positivity was found significantly in IDUs. The first HIV outbreak was reported in IDU's in Larkana in 2004.[7] The HIV prevalence among IDU's in 7 cities of Pakistan in 2005 was 10.8%.[8] The prevalence increased to 37.8% in a study carried out in 16 cities in 2011.[9] If service delivery packages are not provided to the high risk HIV community it is going to spread to their spouses and sex workers from where it can spread in the general population.

Blood transfusion was not found to be significant mode of transmission of HIV in our study. Due to mandatory screening of blood in the blood banks the risk of transfusion transmissible infections is reduced. However, there is a need to carry out more studies among this sector. Surgical procedure was also not found to be significant for HIV transmission.

Co-infection with tuberculosis is common in HIV patients. We did not screen our patients, but only a few were already on anti-TB treatment. All HIV patients should be screened for TB and should be followed-up.

CONCLUSION

Migrant workers constitute a major risk factor for spread of HIV in Pakistan. There is a need for policy making to restrict spread of HIV among this group. Prevalence of HIV may increase unless measures are taken to stop the transmission and to increase the awareness of HIV among this group of population.

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