

Immigration: a potential risk factor for intrafamilial transmission of HIV infection

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ABSTRACT

Background: Injection drug users (IDUs) are at risk of HIV infection more than other groups. Also, immigration is a potent risk factor for HIV infection /AIDS. Saravan is a city in Southeast of Iran that men have to immigrate to other countries to work. Since, family deprivation is a risk factor for occurrence of infection in this group; we decided to define the prevalence of HIV infection in immigrant men and their families.

Materials and methods: In this cross-sectional, descriptive study, in a time period of 5 months in 2005, in Saravan (Southeast of Iran), we evaluated the prevalence of HIV/AIDS in the families of the men with HIV infection/AIDS who had a history of immigration to other countries. Blood samples of the mothers and children were evaluated by ELISA method and in those who had a positive test, results were confirmed with a more specific assay (western blot).

Results: Among 274 patients with HIV infection/AIDS (224 male and 50 female) in Sistan and Baluchestan Province in Southeast of Iran, 65 cases (41 male, 24 female) were from Saravan (a city in Sistan and Baluchestan). Out of 41 men with HIV/AIDS in Saravan, 21 cases had a history of immigration to neighboring countries. Forty- five percent of women (11 cases) who had infected immigrant husbands, showed a positive test and they were infected with HIV. Also, HIV test was positive in 3 children of families whom their fathers were infected immigrants. Fifty-one percent of men with HIV/AIDS had the history of immigration.

Conclusion: Upon these results, immigration and family deprivation are potent risk factors for occurrence of infection.

Keywords: *Immigration, HIV infection, AIDS, Intrafamilial.*
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INTRODUCTION

According to the previous studies HIV infection is increasing particularly among immigrants and homeless people (1). Poverty and having no appropriate accommodation for living

are major factors in increasing HIV infection and its related disorders (2). Most of homeless people oblige to do non ethical behavior and works for overcoming hunger and homelessness problems (3,4). Also, HIV patients loose their jobs due to absence from work because of weakness or multiple hospital admissions for opportunistic infections (4, 5). The prevalence of HIV infection has been reported between 20 and 30% among homeless people (1). A study in the United State

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(Los Angeles) showed that 23% of HIV infected patient are homeless (1). Up to now many different studies have been conducted about the prevalence of AIDS in various countries (1-10). In southeast of Iran especially in rural areas of Saravan the rate of unemployment is high and men have to immigrate to neighboring countries for work to provide living for their families, but homelessness, poverty and family deprivation predispose them to HIV infection. As there is no definite information, we designed this study to investigate the prevalence of HIV Infection in these people in this area.

PATIENTS and METHODS

This descriptive cross-sectional study was performed with cooperation of Health Center of Saravan, during 5 months from Jul to Oct 2005. All HIV infected men were recognized. The families of infected men with the history of immigration were evaluated. Before enrollment all participants gave informed consent. A questionnaire including demographic information and HIV infection risk factors such as history of jaundice, blood transfusion, phlebotomy, injecting drug abuse, tattooing and surgery was completed for each subject. The participants with at least one risk factor were excluded from the study. Then the blood samples were obtained from wives and children of patients who fulfilled inclusion criteria. Samples were evaluated for HIV infection by ELISA Method. Positive samples were evaluated by western – blot method for confirming the diagnosis and infection was confirmed in all patients. Finally 120 children and 24 women were evaluated.

RESULTS

Of 274 HIV infected patients in Sistan & Baluchestan province (224 men & 50 women), 65 were resident of Saravan (41 men and 24 women). Among 41 HIV infected men 21 cases (51%) had

the history of immigration to neighboring countries for work (Table 1).

Table 1. Frequency of HIV infected men according to the history of immigration

Immigration history	Number	Percent
Positive	21	51.2
Negative	20	48.8
Total	41	100

Forty five percent of women (11 cases), whom their husbands were infected with HIV with the history of immigration, had positive HIV test. HIV test was also positive in 3 children in whom both parents were infected. HIV test was positive only in 3 wives of 20 men who were HIV positive but had no history of immigration. In this group only one child had positive test. There was a significant association between women infection rate and immigration history ($P = 0.01$). None of the infected immigrant men or their families had the history of drug injection or phlebotomy. History of jaundice was positive only in 2 children of immigrant infected men with a history of Hepatitis A infection and were excluded from the study. Tattooing was observed in 3 wives of infected men with the history of immigration. HIV test was positive in one of them although they were all excluded from the study.

DISCUSSION

Our study results showed that 51% of HIV infected men had the history of immigration to other countries at least for one year. Recent studies show that HIV infection in some areas is limited to poor people and residents of marginal areas who have the most number of addicts (1, 2, 8, 9). Saravan is a city in Southeast of Sistan & Baluchestan province and is of one of the cities with high rates of unemployment especially in rural areas and men have to immigrate to neighboring and Arabian countries in order to work to

overcome poverty and provide living for their families. Family deprivation, poverty and having inappropriate residence are of predisposing factors of HIV infection in these people.

In our study about half of infected men had the history of immigration to the Persian Gulf area countries and about half of them caused infection of their wives. The studies in the United States show that the prevalence of infection among poor and homeless people is about 8.5% to 19.5% (8). Nelson study also showed that 36% of HIV infected patients are homeless (1). Another study in Israel found that 40% of HIV infected patients are immigrants of Ethiopia country. In that study, 23% of less than 25 years old poor and homeless people had been infected with HIV (9). Various studies have shown that poverty, homelessness and HIV are the loops of a chain. This highlights the role of governmental and non governmental organs, and human rights defenders to have more attention to support homeless people and to remove poverty and provide proper residence for homeless people which may help in reducing HIV Infection Rate. The countries should have the legislation to remove race discriminations, so all people with any race can use the unique facilities (10-12).

According to our results, immigration and homelessness are two important risk factors for HIV/AIDS infection and homeless people need the support of their government to provide home and appropriate health care.

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