Original article

Retrospective Study of HIV Infection among Migrants and House Wives in ART Centre Dhangadhi of Far Western Nepal


Abstract
Retrospective study of 1032 HIV / AIDS patients' personal record file of ART centre Dhangadhi, Seti Zonal Hospital who visited the center from December 2006 to April 2008 was done. The study was done to determine the percentage of migrants amongst the HIV positive people, sex distribution, and age distribution, level of literacy and mode of transmission of the disease amongst the HIV positives.

Out of the 1032 patients in the time frame described, 89.06% were migrants and their wives. Among them 339 were migrant males & 581 their house wives. Thus, 56.29% migrants’ housewives comprised the entire study group, out of which 58.54% were with their husbands and remaining 41.46% were already widowed. The husbands of widows died with AIDS previously due to lack of treatment and HIV information services.

It was seen that 89.06% of the total study group were infected through sexual contact, 9.6% from infected mother to child and 0.96% through IV drug abuse, and 0.096% through infected blood contact. It is obvious that the migrants got the infection through sexual contact and then later sexually transmitted the disease to their wives. The prevalence of HIV infection is high among migrants and their spouses.

Sexual activity is the major and most predominant mode how people in our study group acquired the infection.

Key Words
HIV/AIDS, Migrants, Risk groups, Sexual behavior.

Introduction
Far west region covers almost 1/5th territory of Nepal. Population of this region is 25, 52,139 which is 1/10 of the total population of Nepal. It has nine districts out of which two are in Terai and seven in hilly mountains. ART center Dhangadhi is located in Seti Zonal Hospital in Kailali district, which is the major referral centre of far west Nepal.

Socio economic status of this region in comparison to other parts of Nepal is very low. The major income source of this area is migration and labor work in the neighboring country India where young and middle aged Nepalese people go to the major Indian cities like Mumbai, Delhi, Bangalore, Pune, Haryana to get temporary jobs as labourers. Literacy rate of this area is also very low. The main problems of this region are poverty, illiteracy, ignorance and political conflict (political conflict being the

---

*Focal person ART clinic Dhangadhi
** General Physician, NAMS, Bir Hospital
*** Registrar, Paropakar Hospital, Thapathali
**** Associate Professor Department of Gastroenterology, TUTH
***** Medical Superintendent and Gynaecologist Seti Zonal Hospital, Dhangadhi
problem at the time when the study was conducted).
In span of less than three decades, HIV/AIDS has emerged as the single most challenge to public health, human rights and development of this new millennium.\textsuperscript{1,2} By the end of 2007, it was established that 33.2 million people (30.6 - 36.1 million) across the world were living with HIV and 70,000 of these people were living in Nepal.\textsuperscript{3}

Nepal is experiencing transition in HIV epidemic,\textsuperscript{4} various predisposing factors are prevalent for the rapid spread of HIV in Nepal. Migration is one of the many social factors that have contributed to the AIDS epidemic. According to data by an international organization, migrants who crossed national borders increased from 101 million in 1985 to 175 million in 2000, while a similar number of people may exist as internal migrants within national borders.\textsuperscript{1,5,6}

Broadly the migration pattern in Nepal is divided into two categories: external and internal.\textsuperscript{1}

It is estimated that as many as one million Nepalese currently migrate every year to India for employment. Most of them are men and most migration is circular i.e. men work away from home and family for periods of several months, returning briefly for major festivals or to harvest crop.\textsuperscript{7,8}

The national HIV AIDS strategy (2000 - 2006) in Nepal has identified migrants’ populations; especially labor migrants to India, as one of the vulnerable groups for HIV infection. Two studies have examined the prevalence of HIV among male migrants’ returnees from India and found the prevalences of 3.7% and 10.3%.\textsuperscript{3,9,10,11}

This study was done to determine the percentage of migrants and their housewives amongst the HIV infected who visited ART clinic Dhangadhi according to their age, sex, socioeconomic status, literacy, demographic distribution and mode of transmission of HIV.

Materials and Methods

Retrospective study of HIV/AIDS patients’ personal record file of ART (Anti Retroviral Therapy) centre, Dhangadhi. Retrospective data of 1032 HIV reactive patients who directly visited or were referred to ART clinic Seti Zonal Hospital, Dhangadhi Nepal for counseling and treatment of HIV infection from December 2006 to April 2008 (Magh 2063 to end of 2064). Details regarding age, sex, address, mode of transmission, literacy, socioeconomic status were recorded.

The age groups were grouped at between 15 to 20 years into one as this age group people are normally internal migrants and also this is the pubertal age where there is increased sexual curiosity. Then onwards age groups are grouped into 21-30 into one since this is the age group that comprises normally of married people who go outside the country as external migrants. And the other group as 31-50 years because this is the age group that is married and has been external migrant and doing in and out of the country for quite sometime.

The study group that was chosen was confirmed to be HIV positive by three rapid tests: Determine, Unigold & Capillus. Complete clinical examination was done before institution of ART; that included physical examination, WHO clinical staging, performance scale, CBC, VDRL, LFT, RFT, R/E of urine, CXR P/A view, and sputum for AFB for 3 days and CD4 counts measurement. Suspected cases of HIV (not laboratory proved) and STI cases, which came for treatment, were excluded from the study. ART centre Dhangadhi provides the complete care of the HIV infected patients including treatment of opportunistic infections, hospital admission for serious cases, STI treatment and antiretroviral therapy.

This ART centre is the clinical based targeted intervention program for the control of STI/AIDS.

Result
1032 HIV infected individuals were recorded. Among them 339 were migrants & 581, housewives of migrants, thus total numbering 920. FSW -7, Businessman -6, Dependent babies -99. Chart shows that in the study group, migrants and their wives comprised 89.06%, businessmen 0.62%, female sex workers 0.68%, and dependent babies 9.6%.

84.30% patients were from far western region where 60% females and only 40% males were infected. However in other regions, female patients were less than males. From mid-western region, 15.11%, from western region 0.096%, and from central region 0.58% were coming getting ART services. No any patient from the eastern region.

Similarly, among the infected housewives, 58.54% were with their husbands and remaining 41.46% were widows. The husbands of widows died with AIDS previously due to lack of treatment and HIV information services.

84.30% patients were from far western region where 60% females and only 40% males were infected. However in other regions, female patients were less than males. From mid-western region, 15.11%, from western region 0.096%, and from central region 0.58% were coming getting ART services. No any patient from the eastern region.

Level of literacy was seen to be directly inversely proportional with the risk of acquiring the HIV infection. Table 4 shows that the highest percentage of patients were illiterate (77.13%) and that decreasing percentage of patients was found on increasing education level.

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Particulars</th>
<th>Value</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sexual contact</td>
<td>915</td>
<td>89.06%</td>
</tr>
<tr>
<td>2</td>
<td>Unknown</td>
<td>3</td>
<td>0.28%</td>
</tr>
<tr>
<td>3</td>
<td>Blood Contact</td>
<td>1</td>
<td>0.096%</td>
</tr>
<tr>
<td>4</td>
<td>Drug User</td>
<td>10</td>
<td>0.96%</td>
</tr>
<tr>
<td>5</td>
<td>Vertical</td>
<td>99</td>
<td>9.6%</td>
</tr>
</tbody>
</table>

Table 1. Mode of Transmission

Chart shows that the age of most patients ranged from 31 to 50 years (57.94%). The age group of 21 to 30 was found at risk (29.16%) and only 0.19 % was recorded from age group above 60 years. The children below the age of 14 years were
found at second lowest risk group i.e. 5.61% male and 3.97 % female. Among them females were found 33.72% and males 24.22% in the age group 31-50 years and no female is recorded from the age group above 60. Dependent babies were found at risk through their infected parents (9.59%) whereas FSWs comprised only (0.68%) of transmission and prevention, migrants easily become the victim of HIV. The next victim is their housewives due to lack of awareness and understanding about the disease. Ultimately their wives and children become infected too. Businessmen comprise 0.62% , female sex workers 0.68% and drug users 0.96% of the study population. This ratio is very minimal in comparison to the migrants who comprise 89.06%. Similarly comparing females, it is quite surprising to note that such a low percentage of female sex workers comprise the study group in comparison to 56.29% females belonging to the migrant group.

Among these 56.29% housewives of migrants, 58.54% were with their husbands and remaining 41.46% were widows.

A very important analytical subject here is the widows’ case, because the husbands of widows died with AIDS previously due to lack of treatment and HIV information services.

Low literacy level is a strong risk factor for transmission of HIV. Table 4 depicted that highest percentage of patients were illiterate (77.13%) and the decreasing rate of patients was found on increasing education level.  

The infected migrants’ comprising 89.06% in this study indicates that they have significant role in HIV transmission, because they visit female sex workers frequently and most of them have little or no access to HIV information, health services, and means of HIV / AIDS prevention. Because of risky sexual behaviors including unprotected sex with female sex workers and low level of awareness about mode of transmission and prevention, migrants easily become the victim of HIV. The next victim is their housewives due to lack of awareness and understanding about the disease. Ultimately their wives and children become infected too. Businessmen comprise 0.62% , female sex workers 0.68% and drug users 0.96% of the study population. This ratio is very minimal in comparison to the migrants who comprise 89.06%. Similarly comparing females, it is quite surprising to note that such a low percentage of female sex workers comprise the study group in comparison to 56.29% females belonging to the migrant group.

A very important analytical subject here is the widows’ case, because the husbands of widows died with AIDS previously due to lack of treatment and HIV information services.

Low literacy level is a strong risk factor for transmission of HIV. Table 4 depicted that highest percentage of patients were illiterate (77.13%) and the decreasing rate of patients was found on increasing education level.  

It was seen that 89.06% were infected through sexual contact, 9.59% vertical infection from mothers to child, 00.96% through intravenous drug abuse, & 0.096% through blood contact. Thus it is clear that the migrants were involved in sexual activities and became victims of HIV which was then transferred to their innocent wives.

According to literacy status data, illiterate people comprised 77.13% of the study group. This percentage of infection goes in decreasing order as literacy level increases from primary to higher education (13.27% - primary education, 6.97% - secondary education, 1.93% - higher secondary and 0.77% - higher education). This is probably the reason why the incidence of the disease is so
high amongst migrants who are usually illiterate. The percentage of female sex workers was 0.68%, which is very very low in comparison to housewives of migrants; here we can presume that they are aware about HIV and its modes of transmission; like educated people and businessmen.

The percentage of dependent babies is 9.59%. They were innocently infected due to lack of awareness in their mothers about the mode of transmission of disease to their children.

The chart 5 shows that the age of most patients ranged from 31 to 50 years (57.94%). The age group of 20 to 30 was found at risk (29.16%) and only 0.19% was recorded from age group above 60 years. The children below the age of 14 year were found at second risk group i.e. 5.61% male and 3.97% female.

In the age group 31-50 years. 33.72% were females and 24.22% males and no female is recorded from the age group above 60.

**Conclusion**

The HIV epidemic is highly concentrated among migrants and their housewives. Education, socioeconomic status, age and awareness play significant role in transmission of this disease. The illiterate people, migrants who come in sexual contact without precautions due to lack of knowledge about its transmission are primary risk groups. The innocent house wives are secondary victims of HIV due to infected husbands and babies are infected due to their infected mothers. The results of this study have clearly delineated different areas where HIV/AIDS prevention campaigns and programs need to be focused.

**References**