

Sexually transmitted infections among migrant people and wives of migrants in far western Nepal

Bohara MS

Madan Singh Bohara, Department of Microbiology, Siddhanath Science Campus (Tribhuvan University), Mahendranagar, Kanchanpur, Nepal

Abstract

Background: More than 340 million cases of curable sexually transmitted infections were estimated to have occurred worldwide in 1995. Previous studies have shown that the presence of other concomitant sexually transmitted infections increases the likelihood of HIV transmission. Migrant people are high risk group in acquiring HIV and other STIs. Nepal is facing rapid increase in prevalence of HIV and STIs among high-risk groups such as sex workers, injection drug users and migrant workers. Western part of Nepal faces the same threat.

Objective: The aim of our study was to estimate the prevalence of STIs, and assess knowledge and risk behaviours related to STIs among migrants and their wives in Far Western Nepal.

Methods: A cross-sectional analytical study was carried out in migrant workers, their wives and other women with STD syndromes in the year 2009 at Department of Microbiology, Siddhanath Science Campus, Mahendranagar, Kanchanpur. A total of 208 participants were recruited as they attended voluntary counselling and testing (VCT) centres at Kanchanpur. A structured questionnaire addressing demographic information, sexual life history, sexual contacts, and knowledge and practices related to HIV/STI transmission and prevention was filled up by face-to-face interview. Biological samples were obtained from all participants and tested for STIS, *Treponema pallidum*, *Neisseria gonorrhoeae*, and *Trichomonas vaginalis*, *Candida albicans* and bacterial vaginosis. Pearson's chi-square analysis was performed to test associations between potential risk factors and specified diagnosed infections.

Results: A total of 208 participants were examined and 24.5% were positive for different causative agents of STIs. The prevalence of *T. pallidum* was 2%, *N. gonorrhoeae* 0%, *T. vaginalis* 10%, *Candida albicans* 23% and Bacterial vaginosis 14%. The highest prevalence of STIs was found in age group 30-49 years. The prevalence of STIs was higher in males than in females. Eighty percent patients knew that STIs could be transmitted through sexual contact. Fifty three percent of the participants reported that they "always use condom". Twenty one percent participants had sexual relationship with prostitutes. Most of participants (64%) had only one sexual partner. Twenty four percent had two to four sexual partners and 12% had more than four sexual partners.

Conclusion: The result shows that migrant people are at high risk of infection. The prevalence of curable STIs is alarmingly high and emphasizes the urgent need for interventions aimed at combating the spread of STIs among women in general and migrants or wives of migrants in particular. Education and outreach programs are needed to reduce embarrassment and lack of knowledge related to STIs.

Key words: Behaviour, Migration, Risk Factor, Sexually Transmitted Diseases, Transmission, Wives of Migrants.

Address for Correspondence:

Madan Singh Bohara
Department of Microbiology
Shree Siddhanath Science Campus, Kanchanpur,
Nepal.
E mail: bohara_madan@yahoo.com

INTRODUCTION

Sexually transmitted diseases (STD) continue to be a major and growing public health problem in many parts of the world, especially in developing countries where an estimated 340 million new cases of curable Sexually Transmitted Infections (STIs) occur each year, and 151 million of them occur in South and South-east Asia alone¹.

STIs are among the top five disease categories and about one third of STIs globally occur among people younger than 25 years of age². World Health Organization (WHO) estimated that 400,000 new cases of STIs occur daily in the South East Asian Region (SEAR) alone³. Centre for Disease Control (CDC) estimates that 19 million new infections occur each year, almost half of them among young people aged 15 to 24 years⁴.

STIs are also common in Nepal. The high prevalence of STI in Far Western and Mid Western regions of Nepal could be attributed to the presence of certain communities like *Deuki* and *Badi*, who are engaged in commercial sex and have been found to be suffering from STIs⁵. The high prevalence of STIs increases the risk of the acquiring and transmitting Human Immunodeficiency Virus (HIV) infection. It has been well established that women with STD syndromes are at higher risk of HIV infection. Firstly, the mode of infection of HIV and other STIs are same. Secondly, it is easier for HIV to enter and cause infection because of dysfunction of first line of defence mechanism (e.g. ulceration of the skin). Moreover, its transmission is three to nine times more in patients with STD syndromes as compared to general population.⁶ International evidence indicates that since migration brings about immediate changes in the occupation, social conditions and economic status of people, it could be one of the leading factors linked to high-risk sexual behaviour and STI/HIV transmission. More specifically, migration often allows them to be free from established social norms, develop a sense of anonymity and become separate from family ties. All these conditions create an environment for them to become involved in unsafe and indiscriminate sexual behaviour. STIs facilitate more easily transmission of HIV virus.

Migration is higher in Far Western districts of Nepal than other parts of the country. Large population of migrants' wives are HIV/STI positive⁷. Their husbands leave their home town to earn money. They engage in sexual relationship with multiple partners and prostitutes in India⁹. HIV infection is highest in the Far West Region of Nepal⁸.

In Kanchanpur district, poverty has caused a great number of men to migrate to India for temporary employment. However, in absence of authentic data, it is difficult to ascertain as to what extent the illness is prevalent among

this high-risk group. No HIV/STI prevalence survey has yet been conducted to establish baseline data or to ascertain the extent of linkage between migration and STI transmission in the area. Hence, this study focused on this special population "Migrant labourers" who are at risk of contracting and spreading this dreaded infection and disease HIV/AIDS. So the behaviour and seroprevalence study in this population not only documents the exact prevalence of STI seroprevalence in this population but also helps to control the transmission of STI/HIV in general population through provision of comprehensive care and support service in collaboration with other INGOs/ Hospital located in this district. In Kanchanpur no specific study on the labour migrants is done to generate surveillance data regarding the different types of STIs including HIV/AIDS. The aim of our study was to estimate the prevalence of STIs and assess knowledge and risk behaviours related to STI among migrants and their wives in Kanchanpur.

METHODS

This cross-sectional analytical study was carried out at Department of Microbiology, Siddhanath Science Campus, Mahendranagar, Kanchanpur, during March to June 2009. Altogether 208 patients were selected, examined and analyzed from different sites of Kanchanpur district namely Anti-retroviral therapy (ART) centres of Mahakali Zonal Hospital, VCT centre of Nepal National Social Welfare Association, HIV/AIDS camp at Jhalari VDC and Dodhara VDC. Participants reported as migrants, wives of migrants and others (belonging to migrant family) who visited respective sites from March to June 2009 were included in the study.

The patients were selected for diagnosis of different STIs on the basis of vaginal discharge, pain in lower abdomen, chancre on genital organs and pus discharged from urethra. In case of STIs women were not eligible if they were pregnant, reported to have missed periods or had given birth in the previous six weeks, because of greater susceptibility to vaginal candidiasis at these times. On the day of examination, women were excluded if they were menstruating, because menstrual blood would interfere with the laboratory tests. Unmarried girls were barred to speculum examination, because it was not deemed culturally appropriate for them. Verbal and written consent was taken from each patient.

Table 1. Diagnostic criteria for laboratory –diagnosed STIs ⁶

Diagnosis	Diagnosis Criteria
a. Laboratory-Diagnosed STIs	
Trichomoniasis	Positive wet mount preparation test
Gonorrhoea	Isolation of <i>Neisseria gonorrhoeae</i> from cervical culture or identification of gram-negative intracellular Diplococci in Gram-stained cervical smear.
Syphilis	RPR test was performed by addition of one drop of serum and antigen (reagent-1), appearances of flocculation within 8 minutes indicate positive. Positive sample was confirmed by TPHA reactive test.
b. Endogenous infections	
Bacterial vaginosis	Presence of at least three of the following: (a) Positive amine test (b) presence of clue cells in Gram-stained vaginal smear (c) vaginal fluid pH >4.5 and (d) Homogenous white gray discharge that stick the vaginal walls
Vaginal candidiasis	Positive culture for <i>Candida</i> with the presence of clinical sign (red inflamed tissue and curdy white discharge)

After taking informed consent, they were interviewed to fill up the structured questionnaire. Sexual behaviour and knowledge on STI transmission was reported. Blood samples were collected from all participants. In addition to blood samples cervical and endocervical swabs were collected from females and urethral swab from males. Privacy was strictly maintained during the procedures, and the collected data were kept confidential. Data were coded and analyzed by using Statistical Package of Social Sciences version 16 (SPSS v 16). Chi-square test (χ^2) was used to compare the categorical data. The collected specimen was transported to Microbiology laboratory, Siddhanath Science Campus, Kanchanpur and specimen processing was done as per standard Microbiological operating procedure for STIs investigation.

RESULTS

The study was carried out among 208 migrants, wives of migrants and others (belonging to migrant family).

Based on different clinical finding participants were diagnosed for different diseases. One hundred seventy two patients were tested for syphilis as they complained and clinical finding of unusual discharge, sore, or rash (particularly in the genital area). A mucopurulent endocervical or urethral exudate on physical examination. One hundred and four respondents were tested for Gonorrhoea, Trochomonas and Bacterial vaginosis. Vulvovaginal candidiasis was tested in 99 participants on the basis of with marked itching, watery to curdlike

Table 2: Laboratory Diagnosed STIs

Types of STI	Positive cases
Syphilis (n=172)	3
Gonorrhoea (n=104)	0
Trichomoniasis (n=104)	10
Bacterial Vaginosis (n= 104)	15
Candidiasis (n=99)	23
Total	51

discharge, with adherent white discharge.

Out of 208 participants 40 (19%) were male and 168 (81%) were female. Males have been found to have higher prevalence of infection with different STIs than females.

Eighty percent patients knew that STIs/HIV could be transmitted through the sexual contact followed by other correct response like infected syringe 73%, blood 71%.

Among 208 respondents, three were children and they did not have exposure to sex. Majority of the respondents [104 (51%)] had never used condom. A large number 43 (21%) had prostitute as sexual partner. Two (1%) had sexual relationship with their friends and 10 (5%) had sexual relationship to others. Majority of 130 (64%) were strict in single sexual partner. Forty-nine (24%) had two to four sexual partner and 24 (12%) had more than four sexual partner.

Table 3: Age group wise distribution of patients tested for different STIs.

Age group	STIs positive		Total	p value
	Yes	No		
0-14 years	0	3	3	0.207
15-29 years	14	86	100	
30-49 years	23	76	99	
≥50 years	2	4	6	
Total	39	169	208	

Table 4: Sex wise distribution of STIs

Sex	STIs		Total	p-value
	Yes	No		
Male	22	18	40	<0.01
Female	17	151	168	
Total	39	169	208	

Table 5: Knowledge of STIs transmission.

Mode of transmission	Correct answer	Incorrect answer	Do not know
Sexual contact	80%	18%	2%
Infected syringe	73%	22%	5%
Blood	70%	23%	6%
Mother to baby	60%	26%	14%
Mosquito	8%	35%	57%
Kissing	47%	29%	24%
Normal contact	62%	18%	20%

Table 6: Sexual Behavior of Studied Population (N=205) (Three were children who were never involved in sex and thus excluded from this analysis)

Sexual behavior	Frequency	
Use of Condom	Never used	104 (51%)
	Sometimes	47 (23%)
	Always	54 (26%)
Types of sexual partner (other than spouse)	Friends	2 (1%)
	Prostitute	43 (21%)
	Others (Relatives of migrant but not wives)	10 (5%)
No. of sexual partners	Only one	130 (64%)
	2-4 partners	50 (24%)
	> Four	25 (12%)

DISCUSSION

A total of 51 STIs cases (24.5%) were detected by examination of vaginal, endocervical swabs and serology (table 2). These all types of infection are transmitted by similar mode. These finding are similar to another study conducted at Tribhuvan University Teaching Hospital Kathmandu Nepal⁹, in which the prevalence of *Trichomonas vaginalis* was 13.8%, *G. vaginalis* 15.59%, *Candida albicans* 23.9%, *Neisseria gonorrhoeae* 8.8%, Gram-negative intracellular diplococci 6.4%. Bacterial infections of the genital tract are common and cause significant morbidity¹⁰. Another study conducted at TUTH Kathmandu Nepal also reveals similar finding. Four types of microorganisms were identified, where most predominant organism was *Candida albicans* 25% followed by *G. vaginalis* 14.4%, *Trichomonas vaginalis* 12.5%, and *Neisseria gonorrhoeae* 6.7% intracellular diplococci 5.8%¹¹.

The high proportions of participants belonged to 15-29 years age group. Majority were females. The highest (70%) population was found to be wives of migrant. This data suggest that most of the people of this region leave their home town to earn money as migrant laborers at this age. Male migrants may engage in sexual relationship with multiple partners and prostitutes due to loneliness and need for intimacy and sex. There they acquire STIs/HIV infection and transmit the infection to their innocent homemakers during their short visit to home. Other studies also documented that the people of this age group are more susceptible to STIs/HIV infection. The large proportion of STI positive population belonged to 26- 35 years, the age group with the highest population was migrants. Most of the women who had STIs were in age group 25-35 years¹². This indicates that though age is an important determinant of STIs, migration is also crucial factor in the spread of STIs/HIV in all age groups. Study found that migrant labourer had good knowledge on STIs/HIV. But a significant number had the

misconception that one could contract STIs/HIV through mosquito bites and kissing. Almost 70% respondents fall under the categories of good knowledge, while only 15% respondents were ranked as poor knowledge. This finding was supported by study awareness and STIs/HIV risk behaviours among migrant workers in relation to STIs /HIV - a study from eastern Nepal, in which migrants were aware regarding the transmission of STIs /HIV viz; unprotected sex (92.7%), untested blood (80.5%), infected syringe (75.6%). The commonest misconceptions were found to be; through mosquito bite (53.5%) and through normal contact were nearly 30%¹¹. Sexual behaviour of patients increases the risk of STIs/HIV transmission. High proportion (51%) had never used condom, 47% had used condoms but they ignored to use condom, when they had drunk alcohol which might made them vulnerable to transmission and acquiring of STIs/HIV. A large number 43 (21%) had prostitute as sexual partner.

CONCLUSION

The result shows that migrant people are at high risk of infection. There is an urgent need for provision of services to treat STDs. VCT services should be strengthened and strictly launched to migrants and their wives. Education and empowerment programmes are needed that will promote condom use among migrants. In the longer terms, steps must be taken to address the social and economic pressures that migrants face.

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