ORIGINAL ARTICLE

Clinico-epidemiological Profile of Sexually Transmitted Infections in a Tertiary Hospital: A Cross-Sectional Study

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Abstract

Introduction: Sexually transmitted infections are communicable diseases that occur due to sexual contact. They are a major global health problem that affects the quality of life of patients. Knowledge of the frequency and pattern of sexually transmitted infections helps in early diagnosis and appropriate treatment. The aim of the study was to determine the pattern of various sexually transmitted infections in a tertiary hospital in Kathmandu.

Methods: This cross-sectional study was conducted among patients visiting the Dermatology outpatient department of a tertiary hospital in Kathmandu from 1st Dec 2019 to 30th Nov 2023 after ethical approval from the Nepal Health Research Council (Reference Number: 681/2023). The data were retrieved from the records of the department, entered and analyzed using Statistical Package for the Social Sciences version 21.

Results: A total of 165 patients were included in the study, among which 121(73.33%) were male and 44(26.67%) were female, with a male-to-female ratio of 2.7:1. Most of the patients were married and in the age group 26 to 35 years. Most common sexually transmitted infections were condyloma acuminata 56(33.95%), urethral discharge syndrome 37(22.43%), herpes genitalis 28(16.97%), vaginal discharge syndrome 20(12.12%), syphilis 18(10.90%), molluscum contagiosum 3(1.81%), and others 3(1.81%).

Conclusions: Viral infections were the most common sexually transmitted infections in our study.

Keywords: *condyloma acuminata; epidemiology; sexually transmitted infections.*

Introduction

Sexually Transmitted Infections (STIs) are a group of communicable diseases spread predominantly through sexual contact and caused by over 30 pathogens.[1] Most are asymptomatic, stigmatized, and slowly growing into hidden epidemics.[2] Globally, STIs remain a major public health problem.[3] According to the World Health Organization (WHO) data of 2020, globally more than one million people acquired curable STIs every day of which chlamydia, gonorrhea, syphilis and trichomoniasis were the most common.[4] Untreated STIs like gonorrhea and syphilis can cause infertility, adverse pregnancy outcomes and Human Immunodeficiency Virus (HIV) co-infection.[5-7] Hospital-based studie of STI. Nepal lacks national STI surveillance, though hospital-based studies report a prevalence of 0.3%-1.2%.[8,9]

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This study aims to describe the clinico-epidemiological profile of STIs in patients visiting the outpatient department of the dermatology department of Nepal Armed Police Force (APF) Hospital.

Methods

This descriptive cross-sectional study was conducted after ethical approval from the Nepal Health Research Council (Reference Number: 681/2023). All eligible cases, above 15 years of age, irrespective of gender, diagnosed with STIs who visited the dermatology OPD of Nepal APF Hospital, Kathmandu from 1st December 2019 to 30th November 2023, were included in the study. HIV infection cases were excluded from the study. The data were retrieved from the database from the department. Only the details of patients that were mentioned under the diagnosis of sexually transmitted infections were collected based on the clinical and laboratory evaluation. This information was entered in proforma and verified by principal investigator. The data were entered and analyzed in Statistical Package for the Social Sciences (SPSS) version 21. Mean and standard deviation for continuous data, frequencies, and proportions for categorical variables were calculated.

Results

A total of 12,191 patients visited the dermatology OPD during the four-year study period, out of which 165 (1.35%) patients were diagnosed with STIs. Among them, there were 121 (73.33%) males and 44 (26.67%) females, with male to female ratio of 2.7:1. Majority of patients (76, 46.06%) belonged to age group 26-35 years. Patients ranged from 17 years to 68 years of age, with mean age of 32.70 ±10.09 years (Figure 1).

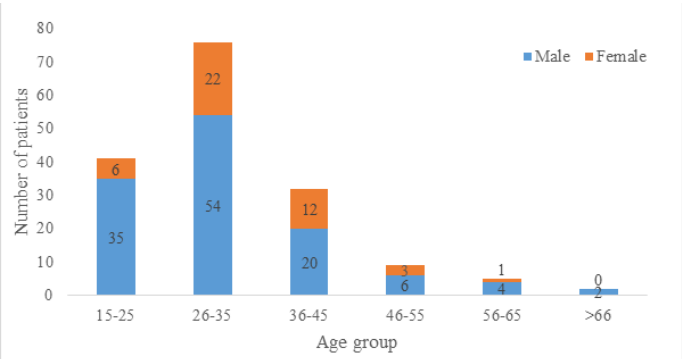

Figure 1: Age and sex-wise distribution of the patients with STIs

In our study 119 (72.12%) patients were married, 39 (23.64%) were unmarried, five (3.03%) were divorced and two (1.21%) were widowed. Among the cases with STI, 102 (61.81%) had multiple sex partners. Most cases 163 (98.87%) had heterosexual mode of contact, while two cases (1.13%) had history of homosexual contact.

The most common STIs diagnosed were condyloma acuminata, seen in 56 (33.95%) cases, followed by Urethral Discharge Syndrome seen in 37 (22.43%) cases. The frequencies and pattern of STIs observed in our study are shown in Table 1.

Table 1: Frequency and Pattern of Sexually Transmitted Infections (n=165).

Diagnosis	Male(%)	Female(%)	Total(%)
Condyloma acuminata	47(38.85)	9(20.45)	56(33.95)
Urethral Discharge Syndrome	37(30.58)	-	37(22.43)
Herpes Genitalis	20(16.52)	8(18.18)	28(16.97)
Vaginal Discharge Syndrome	-	20(45.45)	20(12.12)
Syphilis	13(10.75)	5(11.36)	18(10.90)
Molluscum contagiosum	2(1.65)	1(2.28)	3(1.81)
Others	2(1.65)	1(2.28)	3(1.81)
Total	121(100)	44(100)	165(100)

Discussion

Out of 12,191 patients, who visited Dermatology OPD of Nepal APF Hospital, 165 (1.35%) patients were diagnosed with STIs. Data on prevalence of STI is scarce in Nepal, however hospital based studies done has shown STIs in 0.3%-1.2% of Dermatology OPD visits.[8,9] Similarly, a hospital based study from Northeast India had shown STIs on 0.80% cases.[10] However, a study on pregnant women at antenatal clinic in Nepal had shown prevalence of any STIs as 8.6% (7.1% of trichomoniasis, 1.5 % of chlamydia trachomatis).[11] This difference in prevalence of STIs could be attributed to variation in study site, populations, social and cultural differences, stigma and low OPD visits at COVID era.

In our study STIs were seen more in males, in consensus with other hospital-based studies in Nepal.[5,12-14] Few studies from India have showed male predominance while another by Thapar et al. showed more STI cases in female.[15-17] This was due to more ANC referral in STI clinic in their study.[17] Male predominance in our study might be due to military personnel being primary beneficiary in our hospital. Less females with STIs could be secondary to social restrictions, stigma and reluctancy. Also, inability of our study to include patients from gynecology department could have resulted in less female cases.

Sexually active age group 15-45 years constituted 149 (90.30%) of study population, similar to study done by Paudel et al. with 90.8% cases in 15-49 years age group.[6] Majority 76 (46.06%) of our patients were of age group 26-35 years. Study done by Banger et al. had majority (54.32%) in 21-30 years age group and Vora et al. had 59.70% cases in 25-44 years age group.[18,19] This is also similar to other studies done in Nepal.[13,14] This age group being most sexually active, may have more sexual partners and concurrent partnerships resulting in increased incidence of the disease.

STIs were more common in married patients, similar to other studies from Nepal and abroad.[5,13,16,19] Married people tend to use less protection measures and may take privilege of marital status to have hidden sexual contacts. Partners of case may be the cause for transmission. However some studies show more STIs in unmarried subjects.[12,14] This finding may be due to majority of cases in early twenties in these studies. Heterosexual contact 163 (98.87%) was most common mode of sexual contact similar to multiple studies.[18-21] Homosexual contact was seen 1.13% cases similar to studies by Banger et al. and Devi et al. who showed in 1.28% and 1.2% cases respectively.[18,21]

Most common STIs in our study was condyloma acuminata seen in 56 (33.95%) cases, similar to findings by Paudel et al. and Gyawalee et al.[12-13] Herpes infections were seen in 28 (16.97%) cases which is similar to study done by Narayanan et al. where 17.9% of cases had this infection.[20] It was the third most common STIs in our study. It was the most common STIs in other studies.[18,19] It is also the foremost cause of STI according to World Health Organization.[22] The high incidence of condyloma and herpes is in accordance with other studies.[12,13,16] Worldwide trend of decreasing bacterial sexual infections and increasing trend of viral infections which may also be due to tendency of viral infections to be latent and persistent.[18]

Urethral Discharge Syndrome (UDS) was present in 37 (22.43%) and Vaginal Discharge Syndrome (VDS) in 20 (12.12%) cases. UDS was the second most common STIs in our study. In study done by Karki et al. it was seen in 20.1% and 17% of cases respectively.[5] A study done by Sharma et al. had VDS as most common STIs.[23] It was due to increased referral to STI clinic from gynecology OPD. Low VDS findings in our study may be due to more females visiting gynecology department and seeking treating prior to visiting dermatology department in our hospital.

Syphilis cases were less 18 (10.90%) in our study. However, it was the most common findings in various studies done in Nepal and India.[5,9,10,20] These studies attributed it to routine ANC screening in hospitals and screening of migrant workers for job opportunities. The less incidence in our study might be due to less screening for travels, job opportunities and decreased OPD visits due to travel restrictions as most of our study period is during COVID times. It might also be due to self-medications, antibiotic usage during this time which may have interfered with diagnosis.

Conclusions

In our study, condyloma acuminata was the most common STIs. High prevalence of STIs in married cases highlights importance of contact tracing and partner treatment.

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Conflict of Interest: None

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