

Pattern of sexually transmitted infections in a tertiary care hospital: A five-year retrospective study

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ABSTRACT

Introduction:

Sexually transmitted infections (STIs) have a profound impact on sexual and reproductive health worldwide and especially in a developing country like Nepal. However, adequate studies are lacking in our context with regards to the pattern analysis of the STIs in community and in the tertiary care hospitals. The aim of this study is to understand the prevalence and pattern of different STIs in Nepal.

Methods:

This is a retrospective observational study in which the record of all patients who attended the STD OPD of NAMS, Bir Hospital from 2071 to 2075 B.S. (April 2014 – March 2019) have been analyzed.

Results:

Among the 2658 patients who visited the STD OPD, majority (27.5%) had been diagnosed with syphilis. The second commonest diagnosis was condyloma acuminata accounting for 22.6 % of cases. Urethral discharge syndrome and vaginal discharge syndrome comprised of 20.1% and 17% respectively. Genital herpes constituted 6% of cases whereas genital molluscum contagiosum comprised of 3.4% of cases. Genital ulcer diseases accounted for 2.1% of total cases.

Conclusions:

There was a high magnitude of STIs found in this study, among which syphilis constituted the major burden. The results of this study also urge further awareness programs regarding the clinical features and importance of early treatment of STIs.

Keywords: **Sexually Transmitted Infections, Syphilis, Nepal**

Introduction

Sexually transmitted infections (STIs) are a major global cause of acute illness, infertility, long-term disability and death with serious medical and psychological consequences of millions of men, women and infants. STIs rank among the top 5 disease categories for which adult seek health

care¹. STIs are more dynamic than other diseases prevailing in the community. Their epidemiological profile varies from country to country and from one region to another region within a country, depending upon ethnographic, demographic, socioeconomic, and health factors². Nepal being landlocked and one of the least developed countries in the world

with immense problems has all the predisposing factors for the spread of STIs³. The purpose of this study is to sort out the pattern of distribution of the sexually transmitted infections along with the various risky sexual behaviors among patients who have visited the STI OPD in National Academy of Medical Sciences, Bir Hospital. It is beneficial to find out the existing patterns of STI and sexual behavior in the environment we practice, which will tremendously help to familiarize ourselves with the changing trends of infections and for proper planning and implementations of STD control strategies.

Material and methods

A retrospective chart review of the data collected from the STD register of 2658 patients who had attended the STD OPD of NAMS, Bir Hospital for various complaints during the 5-year period from 2071 to 2075 B.S. (April 2014 – March 2019) was carried out. In those patients, thorough examination including genitalia had been performed, urethral, vaginal and endocervical swabs had been taken and blood was sent for VDRL and TPHA serology as required. HIV cases were not included as they were enrolled directly to ART (anti-retroviral therapy) Clinic, Bir Hospital. Cases had been diagnosed by qualified dermatologists and venereologists based on the detailed history, clinical presentation and relevant laboratory investigations available in the hospital.

Statistical analysis

The data was analyzed using the statistical package for the social sciences (SPSS) version 21 software. Descriptive statistical tools like mean and standard deviation for continuous data, frequencies and percentage for categorical data were used. P value of less than 0.05 was considered significant.

Results

The total number of cases was 2658; of which 1780 were males (67.0%) and 878 were females (33.0%). The age of the patients ranged from 6 years to 85 years with majority of patients (47.6%) belonging to age group of 20-29 years (Table 1). The mean age of patients in study population was 30.84 years. Out of 2658 patients, 2030 (76.4%) were married, 604 (22.1%) were unmarried, 22 (0.8%) were divorced and 2 (0.1%) were widowed. Among the total cases, 2576 were new cases (96.9%) who visited the STD OPD for the first time whereas 82 cases (3.1%) were old cases.

Table 1: Age and sex distribution of cases (n = 2658)

Age (years)	SEX		Total
	Female	Male	
<20	48	73	121
	39.7%	60.3%	100.0%
20-29	397	868	1265
	31.4%	68.6%	100.0%
30-39	277	535	812
	34.1%	65.9%	100.0%
40-49	125	209	334
	37.4%	62.6%	100.0%
50-59	29	62	91
	31.9%	68.1%	100.0%
≥60	2	33	35
	5.7%	94.3%	100.0%
	878	1780	2658

Table 2: Patterns of sexually transmitted infections

Diagnosis	SEX		Total
	Female	Male	
CONDYLOMA ACUMINATA	168	433	601
	28.0%	72.0%	100.0%
GENITAL MOLLUSCUM CONTAGIOSUM	36	55	91
	39.6%	60.4%	100.0%
GUDS	8	49	57
	14.0%	86.0%	100.0%
HERPES PROGENITALIS	24	158	182
	13.2%	86.8%	100.0%
OTHERS	2	6	8
	25.0%	75.0%	100.0%
SYPHILIS	187	544	731
	25.6%	74.4%	100.0%
UDS	0	535	535
	.0%	100.0%	100.0%
VDS	453	0	453
	100.0%	.0%	100.0%
Total	878	1780	2658

Syphilis constituted the maximum number of cases (27.5%). Out of 731 number of syphilis cases, 544 (74.4%) were males and 187 (25.6%) were females. Condyloma acuminata (genital wart) was the second commonest with 601 (22.6%) cases. There were 433 males (72%) and 168 females (28%) who presented with condyloma acuminata.

Urethral discharge syndrome was seen in 535 (20.1%) cases while vaginal discharge syndrome was present in 453 (17.0%) cases. Genital herpes was seen in 182 cases (6.8%), out of which 158 were males (86.8%) and 24 (13.2%) were females. A total of 91 cases (3.4%) presented with genital molluscum contagiosum. Genital ulcer disease was observed in 57 cases (2.1%), among which 49 (86%) were males and 8 (14%) were females (Table 2).

Syphilis was the most common STI in the years 2071, 2072 and 2075. Maximum cases of Condyloma acuminata was seen in the years 2071, 2074 and 2075. Similarly, cases of VDS were more in the years 2071, 2072 and that of UDS were maximum in the year 2072. Genital herpes and genital molluscum contagiosum were less common throughout the last five years.

The total number of STIs showed a minor variation in the pattern during the five-year course. A slight rise was observed among the STI patients during the second year of study. An overall increasing trend in STI patients was observed in this study.

Discussion

STIs have a profound impact on sexual and reproductive health worldwide. Different studies suggest the rising trend. In this study, the average age of the patients was 30.84 years with male to female ratio of 2.03:1. Similar pattern of male preponderance was reported in other studies too^{4,5}. The reason for lesser number of female patients may be due to less pronounced symptoms in females compared to males and also due to reluctance among females to share their problems.

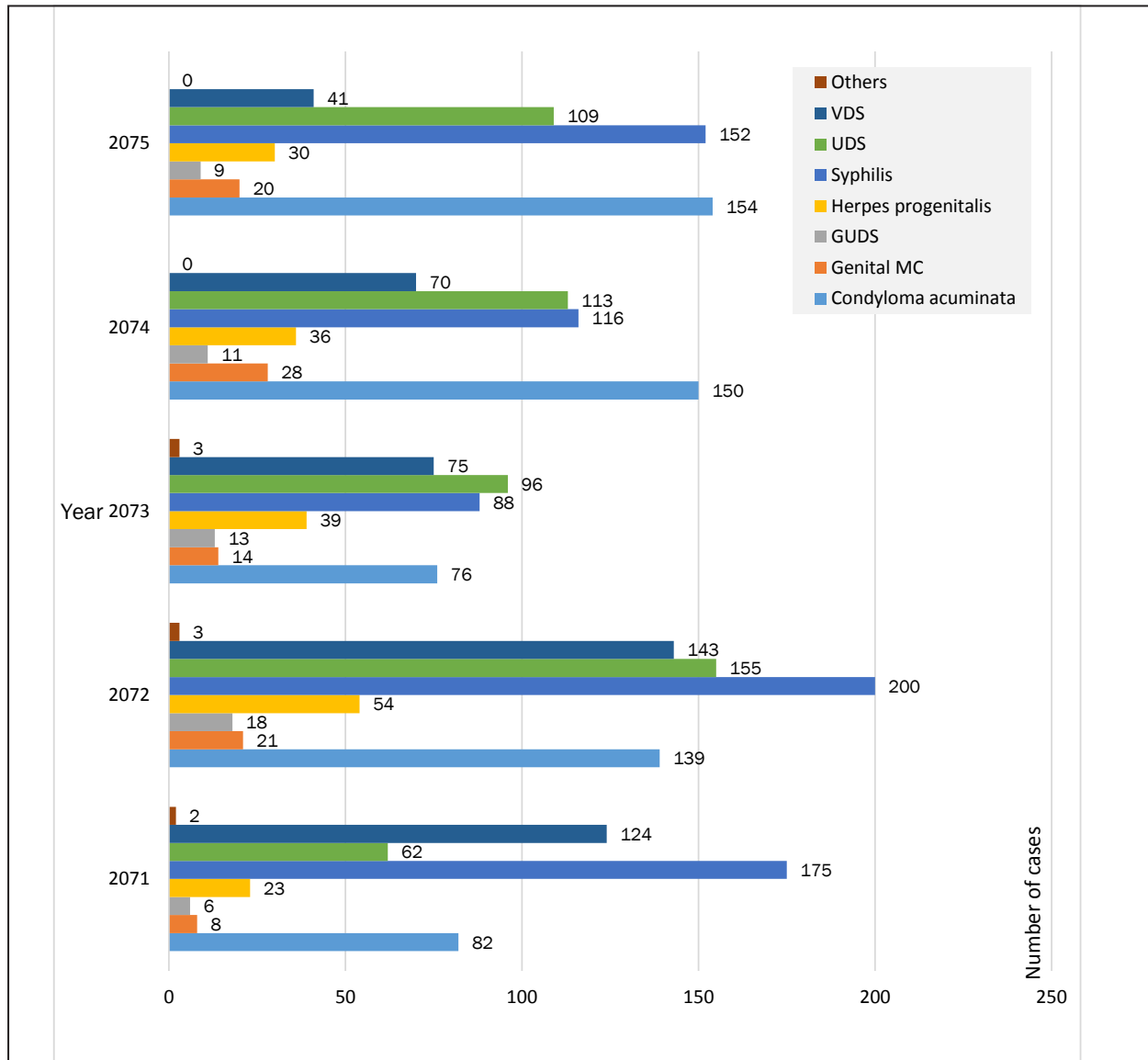


Figure 1: Number of STI cases per annum

The majority of patients (47.6%) in our study fall to the age group 20-29 years possibly due to increased sexual activity with higher number of sexual partners and more concurrent partnerships in this age group. Similar finding was observed in a study conducted in Puducherry².

The majority of the males and females in this study (76.4%) were married and most of them gave a history of risky sexual behavior. Similar findings were reported in a study done in Kerala.⁶ A history of sexual contact with sex workers was obtained in 555 patients (20.9%), thus suggesting routine screening and promotion of safe sex very important among sex workers.

Most common STI found in this study was syphilis which accounted for 731 cases (27.5%). The second commonest was condyloma acuminata which was seen in 601 (22.6%) cases. A similar pattern was observed in a study published in 2005 in India⁷. However, this was in contradiction to another study conducted in Kathmandu, Nepal where condyloma acuminata was found to be the commonest STI⁴. The possible cause for such a high number of syphilis in this study may be attributed to the large number of Nepali population undergoing compulsory TPHA and VDRL screening process for visa requirements during their occupational visit to foreign countries.

In this study, the number of women presenting with vaginal discharge was found to have a fairly decreasing trend with a total of only 453 patients (17%) being diagnosed as vaginal discharge syndrome. This is in contradiction with a study conducted in Himachal, India where vaginal discharge syndrome was found to be the commonest STI⁸. Such finding in our study may be attributed to large number of female patients first visiting a gynecologist with their problems before seeking a venereologist.

The total number of STIs showed a minor variation in the pattern during the five-year course. A slight rise was observed among the STI patients during the second year of study. An overall increasing trend in STI patients was observed in this study. This may be due to the limitation of our study to only health care seeking individuals visiting the STI OPD. Population based studies could be helpful to show the real scenario of STIs in today's time.

Conclusion

There was a high magnitude of STIs found in this study, among which syphilis constituted the major

burden. However, the actual prevalence of STIs and the associated factors need to be determined to further community-based studies. The results of this study also urge further awareness programs regarding the clinical features and importance of early treatment of STI as STIs like syphilis and Genital ulcerative diseases can increase risk of HIV acquisition to several folds.

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