

Original Research Article

The clinical pattern of sexually transmitted diseases in the outpatient department (skin and VD), Sher-E-Bangla Medical College Hospital, Barishal

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ABSTRACT

Background: Sexually transmitted diseases (STDs) affect men and women of all backgrounds and economic levels. CDC estimates that 19 million new infections occur each year, almost half of them among young people ages 15 to 24. Common STDs are acquired immune deficiency syndrome (AIDS), chancroid, genital HPV infection, gonorrhea, syphilis, trichomoniasis and viral hepatitis. The aim was to see the pattern of STDs in the skin and VD outpatient department (OPD), Sher-E-Bangla Medical College Hospital, Barishal, Bangladesh.

Methods: The prospective observational study was conducted among 100 patients with STDs both male and female patients in the OPD of dermatology department of Sher-E-Bangla Medical College Hospital during the period from July 2015 to December 2015 irrespective of sex and age >15 years to assess the prevalence of sexually transmitted diseases.

Results: In this study, prevalence of STDs such as gonorrhea, syphilis, non-gonococcal urethritis, chancroid, genital herpes and genital warts were observed. Gonorrhea was 28%, 13% were syphilis, non-gonococcal urethritis (NGU) was 43% and chancroid, genital herpes, genital warts were 5%, 7% and 4% respectively.

Conclusions: STDs are becoming a major public health problem in our county. So, STDs have to be wiped in the bud by early diagnosis, efficient treatment and appropriate preventive and control measures.

Keywords: Sexually transmitted disease, Syphilis, Gonorrhea, Herpes, HIV

INTRODUCTION

STDs are becoming a major public health problem because of rapid changes in the range and patterns of diseases. This is mainly due to the emergence of multi-drug resistant microorganisms and human immunodeficiency virus (HIV).^{1,2} STDs are a group of communicable diseases that are transmitted predominantly by sexual contact and caused by a wide

range of bacterial, viral, protozoal and fungal agents and ectoparasites. More than 20 pathogens have been identified as the causative organism of STDs. The common STDs are syphilis, gonorrhea, chlamydia, chancroid, genital wart, AIDS/HIV, genital herpes, donovanosis, hepatitis, trichomoniasis and vulvovaginal candidiasis.³ The worldwide incidence of major bacterial and viral STDs is estimated at 125 million cases per year. STDs presenting with genital ulceration are more

common in developing countries than in developed countries. In 1985, the genital ulcer was detected in 5% of STD clinic attendees in North America and 20% to 70% in Africa and Asia. A study showed that the prevalence of syphilitic infection among commercial sex workers (CSWs) in Gambia and Kenya were 71% and 53% respectively.^{5,6} Different studies in Bangladesh on the prevalence of syphilis showed that it was 12%, 8.5% and 32.6% among symptomatic patients, hotel-based sex workers and street-based sex workers respectively.^{4,6} In Bangladesh, the prevalence of HSV-2 infection in the hotel and street-based sex workers was 34.5% and 62.5% respectively.⁷⁻⁹ A study, carried out in Bangladesh among CSWs during 1997 showed 42% infected with *N. gonorrhoea* and many of the isolates were multi-drug resistant. Other studies observed that the prevalence of *N. gonorrhoea* infection among hotel and street-based sex workers were 35.8% and 35.5% respectively.⁸⁻¹² Due to rapid urbanization and industrialization, a large number of people migrate from rural to urban areas. Especially with the flourishing of the garments industry, a large number of female workers have been employed in this sector. It is reported that many of the workers are involved in commercial sex for earning extra money. There are about 100,000 CSWs at present in Bangladesh.¹³⁻¹⁵

They are generally illiterate, divorced or separated women. They may be organized in brothels, guest houses but most of them are floating. Most of the CSWs are suffering from STDs. A survey was learned out amongst 903 institutionalized and floating prostitutes in Narayanganj and Dhaka city. The study revealed that 39% of the institutionalized prostitute and 54.21% of the floating prostitute were VDRL positive. Their clients are usually businessmen, students, rickshaw pullers, truck drivers and foreigners. Condom use is very low during sexual intercourse. As a result, their clients are acquiring STDs during unprotected sex and creating a vicious cycle of STDs intangible in the community.¹²⁻¹⁶

The true incidence of STDs will never be known not only because of inadequate reporting but because of the secrecy that surrounds them. Most of them are not even notifiable. All available data however indicate a very high prevalence of STD (from per cent to 14 percent) in the vulnerable population groups.^{12,13} STDs have a major impact on people's health, especially women and newborn babies. If the infections are not treated timely, it may progress to severe complications in women like PID, can which also affect the fetus during pregnancy, causing maternal ill-health and infant death through miscarriage, stillbirth and premature birth.¹⁴⁻¹⁹

STDs are a worldwide public health concern. In our neighbouring country India, every year 35 to 40 million people are enlisted as a new STD case. In Bangladesh, there is neither a surveillance system nor national data to determine the prevalence of STDs.^{15,16,18-25} Due to rapid urbanization and industrialization, a large number of

people migrate from rural to urban areas. Especially with the flourishing of the garments industry, a large number of female workers have been employed in this sector. It was reported that many of the workers were involved in commercial sex for earning extra money. There are about 100,000 CSWs at present in Bangladesh.^{26,27} Most of the CSWs are suffering from STDs. A survey was learned out amongst 903 institutionalized and floating prostitutes in Narayanganj and Dhaka city. The study revealed that 39% of institutionalized prostitutes and 54.21% of the floating prostitute were VDRL positive. Their clients are usually businessmen, students, rickshaw pullers, truck drivers and foreigners. Condom use is very low during sexual intercourse. As a result, their clients are acquiring STDs during unprotected sex and creating a vicious cycle of STDs intangible in the community.²⁸⁻³¹ Only a very few studies have been carried out at the field level in the country to date. We can conclude from those studies that; a significant number of people are suffering from STDs. So, sexually transmitted diseases are becoming a major public health problem in our county. So, STDs have to be wiped in the bud by early diagnosis, efficient treatment and appropriate preventive and control measures.

METHODS

This was a prospective type of observational study done in Sher-E-Bangla Medical College Hospital (SBMCH), Barishal, Bangladesh from July 2015 to December 2015. Clinically diagnosed cases of STD aged 16-60 years of age attending the department of dermatology and venereology in SBMCH, having a history of sexual exposure either marital or extramarital and patients who have symptoms and signs related to STD were included in the study.

Data was collected in a pre-designed format and by observation of documents by the investigator herself. After the collection of data, all the data were through checking. All data were analyzed by using the computer software Statistical package for social sciences (SPSS) (version 22.0) programme. Statistical analysis was done. Categorical variables were presented in the form of frequency and percentage. Data was presented in the form of tables and graphs. Permission was taken from ethical review committee. All documents were preserved confidentially. Written informed consent was taken from patients.

RESULTS

This was a prospective study, a total of 100 patients were included and analyzed in this study. The distribution of the respondents by sex groups is described in Table 1. 43 patients were from NGU, 28 patients were from gonorrhoea, 13 patients were from syphilis, 7 patients were from herpes, 5 patients were from chancroid and 4 patients were from genital warts. Table 2 shows the distribution of the respondents by age group. In Figure 1 the bar diagram shows the clinical pattern of sexually

transmitted disease, NGU was 43%, gonorrhoea was 28%, syphilis was 13%, genital herpes was 7%, chancroid was 5% and genital warts was 4% only. Table 3 shows the distribution of the respondents by marital status, 65 (65%) patients were unmarried and 35 (35%) patients were married.

Table 4 represents the education status of 41 (41%) patients were from secondary, 23 (23%) patients were from primary, 16 (16%) patients were from HSC, 12 (12%) patients were from graduate and above and only 8 (8%) patients were from no formal education. 59 (59%) patients were from the middle-income group, 27 (27%) patients were from the lower-income group and 14 (14%) patients were from the upper-income group (Table 5). Table 6 is representing the distribution of the respondents by occupation, 33 (33%) patients were from service holders, 32 (32%) patients were from others, 15 (15%) patients were from business, 10 (10%) patients were from

labourers, 6% patients were from housewife and only 4 (4%) patients were from the student. The prostitute patients were 64 (64%) which is the higher number, 24 (24%) patients were street girls and 12 (12%) patients were others (Table 7).

Table 1: Distribution of the respondents by sex groups (n=100).

STDs	Male	Female	Total
	N	N	N
Syphilis	11	2	13
Gonorrhoea	23	5	28
Chancroid	5	0	5
Herpes	5	2	7
Genital warts	3	1	4
NGU	33	10	43
Total	80	20	100

Table 2: Distribution of the respondents by age groups (n=100).

Age group (years)	STDs						Total
	Syphilis	Gonorrhoea	Chancroid	Genital herpes	Genital warts	NGU	
15-24	2	3	0	0	0	2	7
25-34	8	17	3	5	1	23	57
35-44	2	5	1	1	2	9	20
45-54	1	2	1	1	1	5	11
>55	0	1	0	0	0	4	5
Total	13	28	5	7	4	43	100

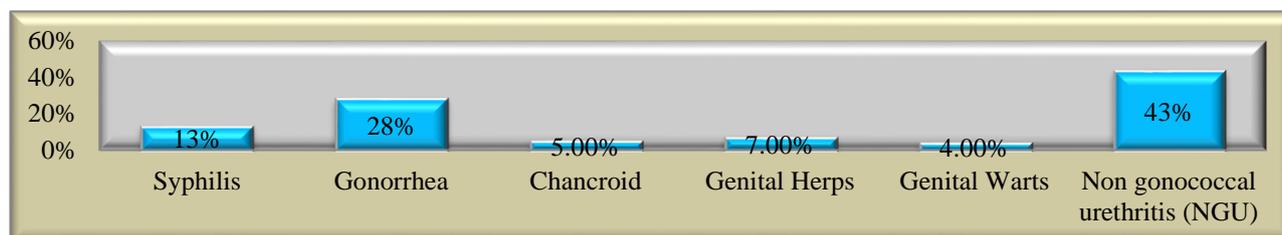


Figure 1: Clinical pattern of STDs.

Table 3: Distribution of the respondents by marital status (n=100).

Marital status	No. of patient	%
Unmarried	65	65.0
Married	35	35.0
Total	100	100.0

Table 4: Distribution of the respondents by educational status (n=100).

Status of education	No. of patient	%
No formal education	8	8.0
Primary	23	23.0
Secondary	41	41.0
HSC	16	16.0
Graduate and above	12	12.0
Total	100	100.0

Table 5: Distribution of the respondents by socioeconomic status (n=100).

Socioeconomic status	No. of patient	%
Upper-income group	14	14.0
Middle-income group	59	59.0
Lower-income group	27	27.0
Total	100	100.0

Table 6: Distribution of the respondents by occupation (n=100).

Occupation	No. of patient	%
Service holder	33	33.0
Business	15	15.0
Labourers	10	10.0
Student	4	4.0
Housewife	6	6.0
Others	32	32.0
Total	100.0	100

Table 7: Distribution of the patients by the source of sexual contact (n=100).

Source of contact	No. of patient	%
Prostitute	64	64.0
Street girl	24	24.0
Other	12	12.0
Total	100	100.0

DISCUSSION

In this study, a total number of 100 STDs patients were randomly selected from OPD of dermatology and venereology in SBMCH of different age groups and both sexes from July 2015 to December 2015. The STDs patients who were diagnosed by clinical, serological and microscopic examinations respectively depend upon different clinical patterns of STDs. In the present study, among the respondents, gonorrhoea was 28%, 13% were syphilis, NGU were 43% and chancroid, genital herpes, genital warts were 5%, 7% and 4% respectively. Among the respondents 80% were male and 20% were female. Male:female ratio was 4:1. In a similar study conducted by the dermatology department of Dhaka Medical College Hospital, Dhaka, Bangladesh (DMCH) from 2009 to 2010 in which the prevalence of STDs, gonorrhoea was 29.58%, 12.68% were syphilis, NGU were 41.58% and in chancroid in, genital in herpes, genital warts were 4.93%, 8.45% and 2.82% respectively.

There were no cases of inguinal bubo. This was in contrast to the northeastern Indian study and study conducted at the Medical College Trivandrum. In another study, GUD-H (38.1%) was the most common, followed by vaginal/cervical discharge (18.6%), urethral discharge (13.8%), and molluscum contagiosum (4.7%) 31 while in the study at Trivandrum, the commonest STD was syphilis, followed by herpes genitalis and condyloma acuminata. HIV was detected in 3.2% of the patients.³² In a study done by Victor et al on patterns of sexually transmitted infections in patients presenting in a special

treatment clinic in Ibadan southwestern Nigeria, the records of 506 patients were used 43.7% (221) were males and 56.3% (285) were females.²⁹ The patient's ages ranged from ten to eighty was the least represented age group. Age, sex, level of education, presenting complaints, presence of yeast cells, VDRL positivity were variables that were looked at. The majority of patients who presented with genital warts were males 72% (44) compared to 28% (17) who were females, 39% (29) were managed for gonorrhoea compared to 61% (46) who were females. Sex was an important factor in STI acquisition. The rate of STI was higher in the group who had tertiary education (genital ulcer disease 60.7% (37), genital warts 61.3% (46), gonorrhoea 41.2% (7), NGU 65.2% (15) compared to genital ulcer disease 31.1% (19), genital warts 33.3% (25), gonorrhoea 47.1% (8) and 8.2% (5) GUD, 5.3% (4) genital warts, 11.8% (2) Gonorrhoea in people with secondary and primary education.²⁹ In this current study, the highest prevalence rate was 57.0% in the age group of 25-34 years, the second-highest percentage was 20.0% in the age group of 35-44 years and the mean age was 35.24+12.54 years. Maximum respondents 65.0% were unmarried and 35.0% of patients were married.

The incidence of STDs is more common among unmarried people. Among educational status (Table 3) showed 41.0% of respondents were up to secondary level and the next majority was 23.0% up to the primary level, 16.0% respondents were HSC level and 12.0% respondents were the graduate and above the level of education. In a similar study done by Ali in DMCH demonstrated that 33.80% of respondents were up to the

secondary level and the next majority was 27.46% up to the primary level and only 2.82% were master's degree holders.¹⁸

The highest rate among occupations was 36.62% were in service, 17.61% businessmen, 14.79% agriculturists, 15.49% students and 9.15% were housewives. In the present study it is seen that (Table 4) maximum (59%) respondents was middle-income group, 27.0% were lower income group and 14.0% were an upper-income group. Incidences of STDs are more common among middle-class income groups. A similar study showed 40.14% were poor, 32.39% were lower-middle class and only 9.86% were upper-middle class.¹⁸

The incidence of marital status shows that the unmarried group (60%) are more suffering from STDs. Most of them gave a history of exposure mainly prostitution (64%) and street girls (24%). The incidence of was non-gonococcal urethritis (NGU) fund high incidence among the 100 cases of STDs and the second position was Gonorrhoea.

The diagnosis was made based on laboratory reports as well as clinical presentation. The treatment was given but most of them did not attend for follow up. The age incidence (Table 2) shows that STDs were maximum in the age group of 25-34 years. This age group shows more activity in sexual behaviour and is a more important factor in the prevalence of STDs in the community.

Among the respondents 78.87% were male and 21.13% were female.¹⁹ In another study, males accounted for 78% of cases, females were 22% (M:F=3.5:1), which was almost similar to the northeastern side of the Indian study where males constituted 75.45% and females constituted 24.24% (M:F=0.09:1).^{18,31} The most common STI was balanoposthitis (39.62%) majority of which were fungal in origin, followed by genital herpes (17.5%), vaginal/cervical discharge (13.4%), genital molluscum (11.74%), genital warts (10.77%), genital ulcerative disease-herpetic (GUD-H) (4.59%), lower abdominal pain (2.66%), and urethral discharge (2.55%) in decreasing order.

Limitations of the study

Single center study over a short period of time with a small sample were the limitations.

CONCLUSION

The study was done to assess the prevalence of STDs attending in OPD of government hospitals like SBMCH and we had found the highest incidence among all STDs was NGU which was 43.0%, among the age group of 25-34 years the highest incidence was 57.0%. This trend of STIs in this study is fairly similar to various studies from different regions.

Recommendations

Although a very small fraction of patients had HIV infection, it may become a major public health problem in the face of globalization and overall moral decline.

Appropriate measure like early screening, promoting safe sex behavior and effective measures to strengthen public awareness should be put into action as soon as possible. Finally undertaking a large-scale multicenter study over a longer duration will depict a clearer picture of the magnitude of the problem.

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Conflict of interest: None declared

Ethical approval: The study was approved by the institutional ethics committee

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