Original Article

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Disease Pattern among the Patients of Sexually Transmitted Infection : A Cross Sectional Study of 70 Cases

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ABSTRACT

Background: *Sexually Transmitted Infections (STIs) including Human Immunodeficiency Virus (HIV) continue to present major health problems in Bangladesh, leading to considerable morbidity, mortality and stigma. To determine the diseases pattern among the patients of sexually transmitted infection attending at the Department of Dermatology and Venereology, Bangabandhu Memorial Hospital of Chattogram, this study was performed.*

Materials and methods : *This cross sectional study was carried in the Department of Dermatology & Venereology, Bangabandhu Memorial Hospital, Chattogram during the period August to November 2023. A total of 70 cases were enrolled in this study. Among them, 58 patients were male and 12 patients were female.*

Results: *Genital ulcer (28.57%) was the most common clinical presentation among the attendees. Primary syphilis was the most common (18.57%) STI detected among the participants followed by herpes genitalis (17.14%). The most common mixed infection was primary syphilis with chancroid (33.34%) followed by herpes genitalis with primary syphilis (25%).*

Conclusion: *Ulcerative STIs singly or in combination are more frequent than the non-ulcerative STIs.*

Key words : HIV; Pattern of STI; Sexually transmitted infections.

Introduction

Sexually Transmitted Infections (STIs) are defined as group of infections and syndromes that are epidemiologically heterogeneous but all of which are almost always or at least often transmitted sexually.[1] Most of the STIs, both ulcerative and nonulcerative, are prevalent in India and constitute one of the major public health problems. Their profile varies with changes in socioeconomic, cultural, geographic and environmental factors prevalent in different parts of the country.[2-6] However, due to lack of adequate laboratory infrastructure in the country, information regarding the profile of STIs relies essentially on syndromic diagnosis. Hence there is very limited data of laboratory-proven STIs.[7,8] However, the availability of baseline information on the epidemiology of STIs and other associated risk behaviors remains essential for the designing, implementing, and monitoring successful targeted interventions.[9,10]

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The World Health Organization (WHO) has placed emphasis on syndromic approach for case measurement and management, particularly in high-prevalence areas having inadequate laboratory facilities, trained staff, and transport facilities.[11] Though the syndromically diagnosed STI has many limitations, continuous analysis of risk assessment and prevalence-based screening studies are necessary to evaluate and monitor the performance of syndromic management.[12]

The aim of the study is to determine the diseases pattern among the patients of sexually transmitted infection attending at the Department of Dermatology and Venereology, Bangabandhu Memorial Hospital, Chattogram, Bangladesh.

Materials and methods

This cross sectional study was conducted at the Department of Dermatology & Venereology, Bangabandhu Memorial Hospital, Chattogram, Bangladesh from August to November 2023. A total of 70 (Seventy) patients of sexually transmitted infection were entrolled in this study. Among them 58 (Fifty eight) patients were male and 12 (Twelve) patients were female respectively.

Data were collected in a predesigned and pretested schedule. Patients were fully oriented about the nature and intention of the study and a written consent was obtained from each study participant regarding the willingness to participate in the study.

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Diagnoses of various Sexually Transmitted Diseases (STDs) were based on the underlying criteria:

i. **Syphilis –** Identification of Treponema pallidum by dark-field microscopy and/or venereal disease laboratory test – qualitative and quantitative.

ii. **Gonorrhea –** Identification of Neisseria gonorrhoeae in gram-stained urethral smear.

iii. **Chancroid –** Identification of Haemophilus ducreyi in gram-stained smear from an ulcer or unruptured inguinal bubo and on clinical grounds after ruling out other ulcerative STI.

iv. **Lymphogranuloma Venereum –** By histopathological examination and on clinical grounds after excluding other STI and non-STI conditions.

v. **Donovanosis –** Identification of Calymmatobacterium granulomatis in tissue smear from the lesion.

vi. **Herpes Genitalis –** Tzanck test and on clinical grounds after exclusion of other ulcerative STI.

vii. **Nongonococcal Urethritis –** By excluding N. gonorrhoea from gram-stained urethral smear and by identifying five or more polymorphonuclear leukocytes per oil-immersion field.

viii. **Candidiasis –** Identification of candida species of fungi in wet potassium hydroxide preparation.

ix. **Trichomoniasis –** Identification of Trichomonas vaginalis in wet film.

x. **Genital Wart –** Clinically by the morphology of the lesion.

All data were processed and analyzed manually and by computer. The results were presented in tables.

Results

Table I Different syndromic presentations of the sexually transmitted disease cases (n=70)

Clinical Presentation	STD Cases		
	Male	Female	Total
Genital Ulcer	18 (31.03)	2 (16.66)	20 (28.57)
Urethral Discharge	15 (25.86)	-	15 (21.43)
Warty Lesion	5 (8.62)	3 (25)	8 (11.43)
Skin Lesion	4 (6.90)	2 (16.67)	6 (8.57)
Subpreputial Discharge	2 (3.45)	-	2 (2.86)
Vaginal Discharge	-	2 (16.67)	2 (2.86)
Mixed	14 (24.14)	3 (25)	17 (24.28)
Total	**58 (100)**	**12 (100)**	**70 (100)**

70 patients included in the study, 58 males and 12 females. On analysis of the collected data, it was observed that majority (28.57%) of the cases presented with genital ulcer, followed by urethral discharge (21.43%) and mixed presentation (24.28%). On further analysis, it was noted that majority (31.03%) of male participants presented with genital ulcer, while majority (25%) of female participants presented with warty lesion. A significant proportion of cases among both male (24.14%) and female (25%) came with mixed presentation.

Table II Distribution of patients according to STDs (n=70)

Diagnosis	STD Cases		
	Male	Female	Total
Primary Syphillis	12 (20.69)	1 (8.33)	13 (18.57)
Herpes Genitalis	10 (17.24)	2 (16.67)	12 (17.14)
Gonococcal Urethritis	9 (15.52)	--	9 (12.86)
Condyloma Accuminate	7 (12.07)	3 ((25)	10 (14.29)
Nongonococcal Urethritis	6 (10.34)	--	6 (8.57)
Secondary Syphilis	4 (6.90	4 (33.33)	8 (11.43)
Mixed Infection	4 (6.90)	--	4 (5.71)
Chancroid	3 (5.17)	--	3 (4.29)
Balanoposthitis	3 (5.17)	--	3 (4.29)
Vulvovaginitis	--	2 (16.67)	2 (2.85)
Total	**58 (100)**	**12 (100)**	**70 (100)**

Primary syphilis was the most common (18.57%) STD detected among the participants followed by herpes genitalis (17.14%), gonococcal urethritis (12.86%), and condyloma accuminata (14.29%).

Table III Mixed infections among sexually transmitted disease cases (n=12)

Type of Mixed Infection	Number of Patients
Primary Syphilis + Chancroid	4 (33.34)
Primary Syphilis + Herpes Genitalis	3 (25)
Primary Syphilis + Granuloma Inguinale	1 (8.34)
Chancroid + Herpes Genitalis	1 (8.33)
Chancroid + Nongonococcal Urethritis	1 (8.33)
Chancroid + |Condyloma Accuminata	1 (8.33)
Nongonococcal Urethritis + Herpes Genitalis	1 (8.33)
Total	**12 (100)**

On analysis of the data, it was noted that the most common mixed infection was primary syphilis with chancroid (33.34%) followed by herpes genitalis with primary syphilis (25%), and in both the conditions, the participants clinically presented with genital ulcer and inguinal swelling.

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Discussion

Perhaps Sexually Transmitted Infections (STIs) are the old human civilization itself.[13] More than 20 different infections are known to be sexually transmitted.[14] A study found that discharge was present in all (100%) the female attendees and so was the most common presenting symptom among females followed by lower abdominal pain (61.3%), ulcers (16.6%), and nodules in genitals (11.4%). While among males, genital ulcer was the most common (80%) presenting symptom followed by discharge (14.7%), lower abdominal pain (14.7%), and nodules in genitalia (11.4%).[15] Another study found that the most common presenting symptom was urethral discharge (54.1%) followed by genital ulcer (17.8%), papules/growth (16.4%), and urethral/pubic pain without associated discharge/ulcer (5.9%%).[16] In the present study, genital ulcer was the most common presenting symptom among the males (31.3%) followed by discharge (25.86%) which was more or less in conformity to the findings of Mishra et al. and among the females warty lesion was the most common (25%) followed by skin lesion (16.67%) which was contrary to the findings of the above-mentioned studies.[15] The present study was done on 58 male and 12 female STD cases, this difference in the sample size could be a reason for the variations in the findings.

A study found that the prevalence of sexually transmitted infections in Cuttack, India noted that herpes genitalis (21.89%) and syphilis (16.27%) were the two most common sexually transmitted diseases while molluscum contagiosum (2.14%) was the least common STI.[17] Findings of the said study were in conformity to the findings of the current study. Arora Chetna's study found that among the males, herpes genitalis (31.8%) followed by veneral warts (30.1%), gonorrhoea (10.7%) and syphilis (9.7%) were the four most common diseases. Among females pelvic inflammatory disease (PID) with or without secondary syphilis (32.2%), trichomoniasis (17%) and herpes genitalis (15.3%) were the commonest.[18] As far as the males were concerned, the findings of the current study were in conformity to the findings of Chetna Arora. But regarding females the findings seemed to differ and the reason again could be projected to the small proportion of females within the sample in the current study.

A study found that among the mixed infections, condyloma accuminata with syphilis was the most common (22.2%) followed by condyloma accuminata with herpes genitalis (11.1%), another study in Seoul, Korea, found that among the mixed infections, syphilis and nongonococcal urethritis were the most common followed by syphilis with vaginitis.[19,20] In the current study, the most common mixed infection was primary syphilis with chancroid (33.34%) followed by primary syphilis with herpes genitalis (25%).

Good clinical care for patients with STIs should extend beyond therapy and include help to avoid future infection. Control activities should focus on the primary prevention of infection through safer sexual practices. Strategies for improving secondary prevention should include identification of people at risk and targeting them for intervention. The control measures for STI should target risky sexual behaviours in the community.

Conclusion

In conclusion, the majority of the patients presented with genital ulcer creating the profile of a patient who was at high risk of acquiring HIV infection in comparison to the nonulcerative STD cases. Thus, it was most essential to treat the STD cases on a priority basis with an intention to reduce the HIV prevalence.

Disclosure

The author declared no competing interest.

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