



CLINICOEPIDEMIOLOGICAL STUDY OF SEXUALLY TRANSMITTED DISEASES IN A TERTIARY CARE CENTER – A RETROSPECTIVE ANALYSIS

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ABSTRACT Sexually transmitted disease (STD) is a major public health concern in the contemporary world with a rising incidence of viral infections and infections caused by normal vaginal flora. The present study is to determine current trends in sexually transmitted diseases in patients attending the std clinic of a tertiary care center. A retrospective study on 489 patients aged 15 years and above was done on the basis of age, sex, marital status, sexual orientation, HIV status, and morphology of the lesions over a period of 1 year. A higher proportion of female patients was observed with 45.68% cases of bacterial vaginosis followed by 38.85% viral infections among the total patients. Primary syphilis was found to be more in HIV coinfecting patients. Hence, it is imperative to adopt a community-based strategy to evaluate the demographic characteristics of the disease and improve surveillance and control measures.

KEYWORDS : Sexually transmitted diseases, retrospective analysis, bacterial vaginosis

INTRODUCTION

Sexually transmitted diseases are the most prevalent infectious diseases with increasing incidence worldwide. Apart from social stigma, STDs have a significant financial and health burden, especially in poorer nations. Women and children incur the most from STDs, particularly from their complications and lingering effects.

The prevalence of STDs has steadily increased since the mid-20th century. The factors included globalization, civilization, huge population movement, worker migration, deteriorating cultural expectations, and promiscuity. As science and technology evolved, it became possible to discover new pathogens using new diagnostic techniques, such as HIV. The development of antibiotics brought a revolution in the treatment of STDs. Despite diagnostic tools and medications, STIs remain a serious health risk for both individuals and nations. Sexually transmitted infections (STI) are a significant public health issue. Additionally, they serve as a portal for HIV transmission through sexual contact by up to 10-fold. The full impact of STIs is still largely unknown. This reflects the lack of a thorough surveillance system, owing to the expense of community-based surveys and limitations.

AIM

Retrospective study to identify the pattern of sexually transmitted diseases in patients attending STD clinic in a tertiary care hospital over a period of one year.

MATERIALS AND METHODS

A retrospective study was carried out on 489 patients aged 15 years and above who attended the STD clinic of a tertiary care center for a period of 1 year from January 2022 to December 2022.

Using information from the clinical history, physical examination, and laboratory tests, a specialist made the diagnosis. Gram stain, KOH and wet mount for discharges, Tzanck smear for Herpes genitalis, and serological tests like ELISA for HIV and VDRL for Syphilis were all performed as part of the necessary investigations. TPHA (treponema pallidum hemagglutination assay) for the patient and VDRL for the partner were done to confirm all VDRL-positive cases. Dark field microscopy was not used due to lack of provisions.

Analysis was done based on following factors - age, sex, marital status, sexual orientation, HIV status, and morphology of the lesions. The diagnosis was based on the clinical history and laboratory tests. Patients received the necessary treatment according to NACO guidelines.

RESULTS

From January 2022 to December 2022, 489 patients visited the STD clinic. 176 of these were men and 313 were women. In terms of STIs, females outnumbered males by a ratio of 1.7:1.

SEX DISTRIBUTION

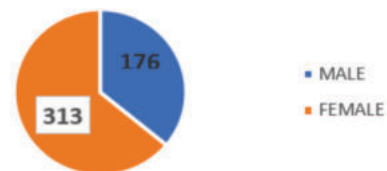


Figure 1: Sex Distribution In The Study

Patients 15 years of age and older were enrolled in the study. Most of the patients were between the ages of 26 and 44. 477 out of 489 patients had heterosexual sexual transmission, bisexual in 7 cases, and homosexual in 5 cases. There were 417 married patients.

AGE DISTRIBUTION

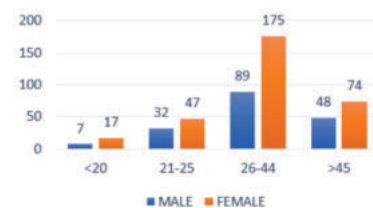


Figure 2: Age Distribution In The Study

The most prevalent STDs seen in the group were Herpes genitalis in the males and bacterial vaginosis in the females. Viral infections made up 38.85% of the cases. In 37.83% of cases, bacterial infections were present; in 21.6%, fungal infections.

ETIOLOGY

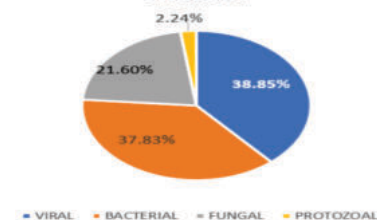


Figure 3: Etiology Of Stds In The Study

Herpes genitalis was the most prevalent STD in both sexes that caused ulcers. Herpes genitalis was found in 57 females and 65 males. The majority of the non-ulcerative group had genital warts. Genital warts affected 12 females and 11 males. Buschke Lowenstein's tumor was reported in one male patient. Four females and seven males were found to have genital molluscum contagiosum. In the group of patients with urethritis, gonococcal urethritis affected 15 patients, while non-gonococcal urethritis affected 16 patients. Gonococcal urethritis was seen in 14 males and 1 female. Trichomonas vaginalis was confirmed in 11 females by the wet mount. Non-gonococcal urethritis was diagnosed in 5 males.

The most common type of bacterial STD was syphilis. 21 cases had positive VDRL, and 10 cases had partner positivity. All positive VDRL cases were confirmed with TPHA. The number of male and female patients affected with syphilis includes 7 and 14 respectively. Of the 14 males, 2 had condyloma lata. 64 females and 38 males had candidiasis. The commonest viral STD reported was herpes genitalis.

HIV positivity was seen in 31 patients- 21 males and 10 females. Commonest STD in HIV positive is herpes genitalis in both sexes.

Table 1: Pattern Of Sexually Transmitted Diseases In The Study

STD	MALES	FEMALES
Bacterial vaginosis (29.24%)	0	143 (45.68%)
Herpes Genitalis (25.35%)	65 (36.93%)	59 (18.84%)
Candidiasis (21.06%)	38 (21.59%)	65 (20.76%)
HIV (6.33%)	21 (11.93%)	10 (3.19%)
Genital warts (4.7%)	11 (6.25%)	12 (3.83%)
Syphilis (4.29%)	14 (7.95%)	7 (2.23%)
Gonococcal urethritis (3.06%)	14 (7.95%)	1 (0.31%)
Genital molluscum contagiosum (2.45%)	7 (3.97%)	5 (1.59%)
Trichomonas Vaginalis (2.24%)	0	11 (3.5%)
Non-gonococcal urethritis (1.02%)	5 (2.84%)	0
Chancroid (0.2%)	1 (0.56%)	0
Donovanosis (0)	0	0
LGV (0)	0	0
Total (489)	176	313



Figure 4: herpes genitalis



Figure 5: molluscum contagiosum



Figure 6: secondary syphilis



Figure 7: Buschke Lowenstein tumor



Figure 8: genital warts

DISCUSSION:

In recent years, there has been a reduction in the number of patients visiting STD clinics due to improved diagnostic and treatment facilities and better patient education. The female-to-male ratio in the present study was 1.7:1. This supports the study conducted by Rita Vora et al (1).

In the present study, the majority of the patients were in 26-44 years as this group is the most sexually active and is at the greatest behavioral risk for being more susceptible to STI acquisition. This is in accordance with the studies by Devi et al (3), Nair et al (4) and Arackkal et al (6).

In the present study, 86.3% of patients were married. The fact that STD rates are higher among married people emphasizes the significance of partner management, counseling, and contact tracing.

Heterosexual contact was the commonest type of sexual contact seen in 97.5% of patients in the present study which is comparable with the study by Vora et al (97%).

In the present study, vaginal discharge was the most common with bacterial vaginosis (45%) at the top. This is similar to another study by Bitew et al (48.6%) (10). Although bacterial vaginosis is seen as a trivial condition, it is devastating in terms of lost workdays and treatment costs. It also increases the risk of infertility and acquiring other STDs. The use of vaginal douches, antiseptic washes, and barrier contraception may have contributed to the increasing prevalence of bacterial vaginosis in women in the present study. This was followed by herpes genitalis and HIV.

Overall, the high prevalence of viral STDs could be attributed to the persistent and recurrent nature of the infection, indiscriminate use of antibiotics, self-reporting by patients, and the effectiveness of the syndromic approach of treatment at the primary level (7). High prevalence of viral STDs especially herpes genitalis were found in other studies by Zaikia et al and Jain et al (2,5). However, a study from

Andhra Pradesh showed a declining trend in genital herpes (8). Various studies have shown a rise in the prevalence of syphilis in recent years in India (9) and abroad. This has been explained by behavioral changes, socioeconomic conditions, and a surge in the prevalence of AIDS. In the present study, males were twice as affected by syphilis as females. Primary syphilis was the most common presentation in patients with HIV and syphilis, which may be related to greater awareness and early reporting.

Interestingly, there were no cases of donovanosis and LGV. Another STD which shows a decreasing trend is chancroid (0.2%). HIV seropositivity among STD patients was 6.33 %, more than the national average by NACO (0.21%). Herpes genitalis was the common STD associated with HIV confirming the fact that genital ulcerative disease is a high-risk group for HIV infection. This is in consistent with studies by Devi et al.

CONCLUSION

The present study showed a higher prevalence of bacterial vaginosis and viral STDs. Also, primary syphilis in HIV coinfecting patients. Rising HIV infection, antibiotic misuse, and the chronic and recurrent nature of the disease could be the contributing factors to the substantial increase in viral STDs. Early reporting and subsequent diagnosis of primary syphilis have been made possible by improved awareness and screening among the HIV-infected population. The importance of this study is therefore in monitoring disease epidemiological patterns and promoting better surveillance and control measures through a community-based approach.

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