

Pattern of Sexually Transmitted Infections in a Tertiary Care Hospital - A Retrospective Study

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Abstract

Background: Sexually transmitted infections (STIs) pose a major health problem worldwide and even more so in the developing countries like ours. Due to the lack of adequate laboratory infrastructure in the country, information regarding the profile of STIs relies essentially on syndromic diagnosis. Knowledge about its current patterns is very essential to formulate an effective control strategy, particularly in a resource constrained country like ours.

Aims: to study the patterns of STIs in patients attending the STI clinic of a tertiary care hospital using a syndromic approach.

Materials and Methods: A retrospective analysis of the data of 1200 consecutive STI patients attending STI clinic from January to June 2019 was carried out. The demographic data of all cases, the syndromic diagnoses and the laboratory reports for HIV and VDRL screening were recorded and were analyzed.

Results: A total of 1200 cases (males and females) were studied. The most common STI overall was cervicovaginal discharge followed by genital herpes, warts, molluscum contagiosum, genital ulcerative disease-nonherpetic, urethral discharge and lower abdominal pain in decreasing order of frequency. Genital herpes was the most common STI in males. Collectively, the proportion of viral STI was more as compared to non-viral STI.

Conclusion: The contemporary trend of STIs is the relative rise in the proportion of viral STIs including genital herpes, warts, and molluscum contagiosum. Since STIs and HIV perpetuate each other, prompt diagnosis and adequate treatment of all cases of STIs is necessary to prevent HIV transmission.

Key Words –Sexually transmitted infections (STI), Human immunodeficiency virus (HIV) infection

I. Introduction

Sexually transmitted infections (STIs) are a loosely defined constellation of infections and syndromes that are epidemiologically heterogeneous, but all of which are almost always or at least often transmitted sexually.¹ Unprotected sex with an infected partner is by far the most important risk factor for STI/HIV infection.² STIs pose a major health problem worldwide and even more so in the developing countries like ours. In order to plan and implement strategies to combat this problem, it is essential to know the current patterns of STIs in the various parts of the country. Although a number of advanced diagnostic techniques have been introduced so as to improve the diagnostic yield of various STIs, the assessment and management of patients is still largely based on syndromic approach given by the National AIDS Control Organization (NACO) owing to lack of resources in majority of the health-care centers. We aim to study the patterns of STIs in 1200 patients attending STD op in tertiary care center based on the syndromic approach.

II. Materials And Methods

This is a retrospective study with data of 1200 patients attending STI clinic in January to June 2019. Of all these patients, a detailed demographic data regarding age, gender, residence, occupation, educational status, marital status were taken. The history regarding onset, duration, and progression of symptoms, and similar complaints in partner were recorded. Patients were categorized as per the NACO guidelines³ into genital ulcerative disease-herpetic (GUD-H), GUD-nonherpetic (GUD-NH), cervicovaginal discharge, lower abdominal pain, and urethral discharge. In addition, other STIs that do not come under the umbrella of syndromic management such as genital warts and genital molluscum contagiosum were included in the study. Diagnosis was made on the basis of history, examination findings and relevant investigations reports of VDRL for syphilis, hepatitis B virus surface antigen, antibody for HIV, Gram-stain, KOH preparation and wet mount reports. The complete demographic data were analyzed to determine the pattern of STIs.

III. Results

In the study population, 42% (504/1200) were males, 48% (696/1200) were females with male to female ratio being 3:4.14. The majority of patients attending STI clinic belonged to the age group 16-30 years 49% (588/1200), followed by the 31-50 years 41.66% (500/1200), >50 years 9.33% (112/1200), and <15 years no cases were recorded.

The detailed socio-demographic profile of the study population is summarized in Table 1.

Table 1- Socio-demographic profile of study population

CHARACTERISTICS	NUMBER, n (%)
Total number of cases	1200
Males	504(42%)
Females	696(48%)
Age in years	
Less than 15	0(0%)
16-30	588(49%)
31-50	500(41.66%)
>50	112(9.33%)
Marital status	
Married	984(82%)
Unmarried	196(16.33%)
Divorced/widow	20(1.66%)
Educational status	
Illiterate	452(37.66%)
1 st -5 th	96(8%)
6 th - 10 th	316(26.33%)
Intermediate	160(13.33%)
Degree and above	176(14.66%)
Residence	
Rural	568(47.33%)
Urban	632(52.66%)

Around 63% of the patients were literate, among them 26.33% studied between 6th to 10th, 14.66% studied degree and above, 13.33% studied intermediate and 8% studied 1st to 5th.

52.66% (632/1200) of the population were residing in the urban area.

The overall distribution of STI cases is depicted in Table 2

TABLE 2- Distribution of STIs

Distribution of STIs	NUMBER (%)
GUD-H	392(32.66%)
GUD-NH	96(8%)
cervicovaginal discharge	412(34.33%)
urethral discharge	32(3%)
lower abdominal pain	16(1.33%)
genital warts	152(12.66%)
molluscum contagiosum	100(8.33%)

The most common STI observed is cervicovaginal discharge (412, 34.33%), followed by GUD-H (392, 32.66%). The proportion of rest of the STIs in decreasing order of proportion is genital warts (152, 12.66%), molluscum contagiosum (100, 8.33%), GUD-NH (96, 8%), urethral discharge (32,3%) and lower abdominal pain (16, 1.33%). The STIs were further categorized as viral and nonviral. The proportion of viral STIs (53.65%; GUD-H, genital warts, and molluscum contagiosum) was more as compared to non-viral STIs (46.35%; GUD-NH, cervicovaginal discharge, urethral discharge and lower abdominal pain)

Among females, cervicovaginal discharge constituted the maximum proportion of cases. GUD-H was the most common STI in males.

The number of HIV positive cases were 192 (3%), out of which 72 (37.5%) were males and 120 (62.5%) were females.

Out of the total number of GUD-NH cases, 64 showed RPR positivity (52 males and 12 females)

IV. Discussion

Sexually transmitted diseases (STDs) are a global health problem of great magnitude. The pattern of STDs differs from country to country and from region to region, especially in large countries such as India. As per the NACO annual report, an estimated 3 crore episodes of STI/reproductive tract infections occur every year in the country.⁴ Considering the non-availability of health-care facilities in the remote parts of the country, the

data shown in the surveys may actually be underreported. This emphasizes on the need of constant surveillance regarding the prevalence and patterns of STI from all parts of the country.

In our study, the number of female patients seen is more than that of the males. This is in contrast to previous studies where males outnumbered females^{5, 6, 7}. This is in concordance with study done by Nyati et al.⁸ This is because we included the STI cases seen in the gynecology outpatient department as female patients tend to visit the gynecology department rather than STI clinic for genitalia-related complaints. The majority of patients were in the age group of 21–30 years. This is in concordance with other studies as this is the most sexually active and productive age group.⁸

In males, genital herpes was the most common STI. In females, however, cervicovaginal discharge ranked the highest, followed by herpes and warts. Collectively, the viral STI predominated over the non-viral STIs. There are many recent reports showing an emerging trend of viral STIs. In a retrospective study of the pattern of STIs in STI clinic attendees over a 4-year period in 4847 patients in tertiary care hospital Rajasthan, the viral STIs such as GUD-H, condyloma acuminata, and molluscum contagiosum were much more prominent than the bacterial STIs such as urethral or cervical discharge, syphilis, and GUD-NH⁸. A marked decline in bacterial STIs, resulting in an apparent increase in the viral STIs, has been reported from various other Indian studies^{9, 10}. This can be partly attributed to the widespread use of broad-spectrum antibiotics for other diseases. This may result in partial or complete treatment of bacterial STI or may alter the course of the disease, resulting in overall decreased proportion of bacterial STI.

The key to effective control of STIs lies in prevention. Primary prevention can be achieved by higher literacy rates, introducing formal sex education in the school curriculum, and mass education about safe sex practices including avoidance of promiscuity and regular use of barrier contraceptive. There is need of sexual health awareness programs, especially targeted at the vulnerable population. Furthermore, secondary prevention, that is, rapid diagnosis and management of STIs, is definitely a feasible and effective way to reduce the overall burden of STI as well as to prevent HIV transmission.

V. Conclusion

Viral STIs such as molluscum contagiosum, herpes genitalis, and condyloma acuminata are on the rise among STI/RTI clinic attendees due to the occurrence of asymptomatic shedding, partial treatment or modified course of the bacterial STDs, thereby leading to decrease in the proportion of bacterial to viral STDs. Since STIs and HIV perpetuate each other, prompt diagnosis and adequate treatment of all cases of STIs is necessary to prevent HIV transmission.

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