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Original Research Article

The trend of STD in COVID times- A retrospective hospital-based study from Northeast India

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ABSTRACT

Background: Sexually transmitted diseases (STD) are considered to be a burden for mankind since long. Different studies showed variation in epidemiology of STD. Our study is targeted towards unveiling the prevalence of STD during covid times.

Aim: To study the change of prevalence of sexually transmitted diseases during covid times.

Materials and Methods: A retrospective study of all patients, who attended the outpatient department (OPD) of Dermatology, Venereology and Leprosy (DVL) of Silchar Medical College and Hospital, Assam, India was done. All the follow-up cases and patients who showed no evidence of STD were excluded from the study.

Results: In the study period (2020-21), out of the 10,954 patients who attended the DVL OPD, 90(0.8%) patients had STD, whereas, in the year (2019-20), total of 57,275 patients attended the clinic, among which 272(0.5%) patients had STD. STD was more among males than females, showing a male: female ratio of 1.9:1 in 2020-2021 as compared to 1.5:1 in 2019 to 2020. Some results were similar in both the study period; like the mean age group was 36 years, most females were housewives and males were shopkeepers and majority of the patients with STD were married. In our study from 2020-21, Herpes genitalis with 29 cases (32.2%) was the most common STD, followed by syphilis and urethral discharge with 17 (18.8%) cases each. Vaginal discharge with 11(12.2%) cases, genital warts with 7(7.7%) cases, GUD-non-herpetic with 5(5.5%) cases and balanoposthitis with 4(4.4%) cases were other STDs during the 2020-'21 period. When compared to 2019-20, herpes genitalis was most common with 72(26.4%) cases followed by vaginal discharge with 58(21.4%) cases, syphilis with 43(15.8%) cases, urethral discharge with 58(21.4%) cases, GUD-non herpetic with 26(9.6%) cases, balanoposthitis with 21(7.8%) cases and warts with 16(5.8%) cases.

Conclusion: Amidst the COVID-19 crisis and lockdown, a decline in the overall number of patients was seen and similar trend was observed among STD patients reporting to our hospital. Among these, the majority had genital ulcer disease of viral origin. Females were most commonly affected and a decline in bacterial STDs was also seen.

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1. Introduction

Since, the dawn of humanity sexually transmitted diseases (STD) has always posed a challenge for individuals, societies, and public health authorities. STD exist

worldwide, but their extension and influence vary according to vulnerability, individual behaviour, access to health care services and preventive measures taken by health facilities. It is stated by the World Health Organisation (WHO) that STD not only compromise the quality of life but also affects the sexual and reproductive health.¹

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The global estimates of STDs are issued on consistent methodology. In present times, it is estimated that people aged 15- 49 years constitute around 357 million new cases involving - 131 million cases of *Chlamydia trachomatis* infection, 142 million cases of *Trichomonas vaginalis* infection, 78 million cases of *Neisseria gonorrhoeae* infection and 6 million cases of *Treponema pallidum* infection. STD of viral origin are also highly prevalent such as herpes simplex type 2 (HSV-2) infection constitute about 417 million cases, and human papillomavirus (HPV) infection is considered to be harboured by 291 million women. Prevalence of STD also shows regional, gender and occupational variation.²

In India, every year, around 5%-6% (\approx 30 million) of the total sexually active adult population have been reported to suffer from STD. The prevalence of STD is more in male than in females. Women and children bear the brunt of STD, especially of the complications and sequelae arising out of them.³

As a result of COVID crisis, people reporting to STD clinics have declined. This study is directed towards the evaluation of the change of prevalence of STD during COVID times.

2. Materials and Methods

After taking permission from hospital ethical committee, a retrospective observational study was conducted in the Department of Dermatology, Venerology and Leprosy (DVL) of Silchar Medical College and Hospital (SMCH), Silchar (Assam), India. All the patients with confirmed STD from April 2020 to March 2021 were included in the study. This study data was compared with the previous year data from April 2019 to March 2020. All the follow-up cases of STD attending the STD clinic were excluded from the study.

3. Results

Out of 10,957 patients who attended the outpatient department of DVL, SMCH from April 2020 to March 21, only 90(0.8%) patients had STD. Whereas, in 2019-20, total of 57,275 patients attended the OPD, among which 272(0.5%) patients had STD.

Among 90 patients, 37(41.1%) patients belonged from age group of 31-40 years, followed by 27 (30%) patients from age group 21-30 years, 12 (13.3%) from age group 41-50 years, 10 (11.1%) from 11-20 years, 3 (3.3%) from 51-60 years, and only 1 (1.1%) patient was more than 61 years old. During April 2019 to March 2020 out of 272 patients who presented with STD, 120 (44.1%) patients belonged from 31-40 years of age group, 69 (25.4%) from 21-30 years age group, 42 (15.5%) from 41-50 years age group, 19(6.9%) from 51-60 years, 16(5.9%) from 11-20 years and 6(2.2%) patients were more than 60 years old.(Figure 1)

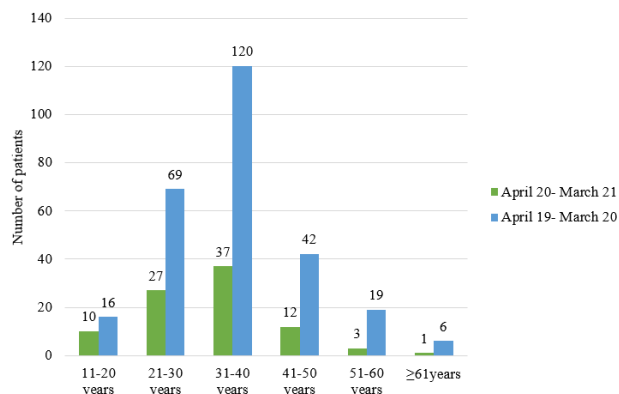


Fig. 1: Age distribution and comparison of patients with STD

On assessing the patients for gender distribution, it was seen that 59 (65.5%) patients were males and females constituted only 31(34.4%). Before the COVID outbreak, the scenario was almost same where patients presenting with STD were mostly males constituting 165(60.7%) patients and females contributed 107(39.3%) patients.(Figure 2)

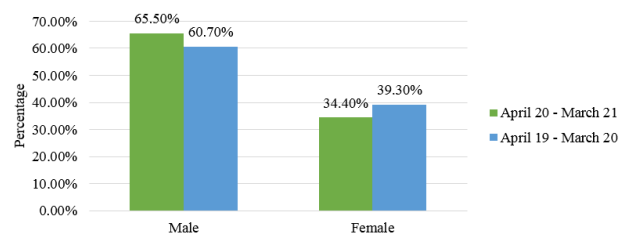


Fig. 2: Gender distribution and comparison of patients with STD

On the evaluation of marital status, in the year April 2020 to March 2021, 71(78.8%) patients suffering from STD were married, and 19(21.1%) were unmarried. Whereas, in the year April 2019 to March 2020, 236(86.7%) were married, and 36(13.2%) were unmarried.(Figure 3)

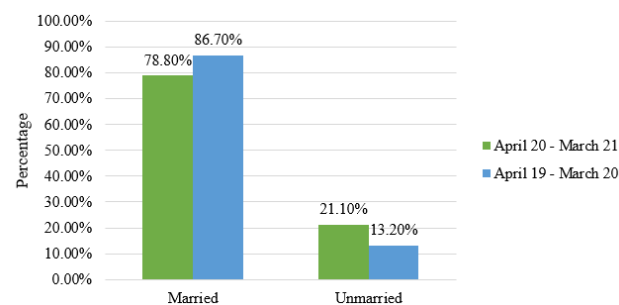


Fig. 3: Marital status distribution and comparison of patients with STD

Table 1: Occupation distribution and comparison of patients with STD

Occupation	Total number of patients. (April 2020- March2021)	Percentage (%)	Total number of patients. (April 2019-March 2020)	Percentage (%)
Housewife	22	24.4	68	25
Shopkeepers	19	21.1	47	17.2
Skilled labourers	11	12.2	31	11.4
Student	10	11.1	16	5.9
Driver	9	10	40	14.7
Office worker	7	7.7	31	11.4
Tea garden worker	5	5.5	15	5.6
Unemployed	5	5.5	17	6.3
Undisclosed	3	3.3	7	2.5
Total	90	100	272	100

Table 2: Diagnosis of patients with STD

Diagnosis	Total Number of patients(April 2020- March 2021)	Percentage (%)	Total number of patients(April 2019-March 2020)	Percentage (%)
GUD-Herpetic	29	32.2	72	26.4
Syphilis	17	18.8	43	15.8
Urethral discharge	17	18.8	36	13.2
Vaginal discharge	11	12.2	58	21.4
Warts	7	7.7	16	5.8
GUD-non herpetic	5	5.5	26	9.6
Balanoposthitis	4	4.4	21	7.8
Total	90	100	272	100

While assessing the occupation of the patients, it was observed that out of 90 patients, 22(24.4%) patients were housewives, 19(21.1%) were shopkeepers, 11(12.2%) were skilled labourers, 10(11.1%) were students, 9(10%) were drivers, 7(7.7%) patients worked in offices, 5(5.5%) patients were tea garden labourers, 5(5.5%) were unemployed and 3(3.3%) patients didn't disclose their occupation. Even before the COVID outbreak, out of 272 patients, majority patients were housewives 68(25%), 47 patients (17.2%) were shopkeepers, drivers 40(14.7%), skilled labourers 31(11.4%), and, 31(11.4%) were working in offices, 17(6.3%) unemployed, 16 (5.9%) students, 15(5.6%) tea garden workers and 7(2.5%) patients didn't disclose their occupation.(Table 1)

Out of 90 patients, herpetic ulcer/ herpes genitalis was seen in 29(32.2%) patients, syphilis and urethral discharge in 17(18.8%) patients each, vaginal discharge in 11(12.2%) patients, warts in 7(7.7%) patients, GUD- non-herpetic in 5(5.5%) patients and Candidal balanoposthitis in 4(4.4%) patients. Whereas, in the pre-lockdown phase, out of 272 patients, most patients were of GUD -Herpetic 72(26.4%), followed by women with vaginal discharge 58(21.4%), syphilis 43(15.8%), urethral discharge 36(13.2%), GUD-non herpetic 26(9.6%), balanoposthitis 21(7.8%) and warts constituted 16(5.8%) patients.(Table 2)

4. Discussion

This study is done to understand the change in trend of STD during COVID times in a tertiary care hospital of Northeast India. We compared the data of study period (April 2020 to March 2021) with data of pre-COVID year available in our hospital (April 2019 to March 2020).

The majority of cases in our study belonged from the age group of 31-40 years, both pre-COVID and during COVID. Our study showed less prevalence among teenagers accounting for only 11.1% of cases. Our study revealed that patients diagnosed with STD were mostly males than females with a ratio of 1.9:1 in 2020-21 as compared to 1.5:1 in previous year. The prevalence of STD was more common in married than unmarried in both the years.

The majority of male patients attending the clinic were shopkeepers (17.2%) while the women were housewives (25%) during the year April 19-March 20, whereas, during COVID time (2020-21) most female patients were housewives (24.4%) but there was a sharp decline in total number of females attending our hospital and male patients were mostly shopkeepers (21.1%) followed by skilled labourers (12.2%). This is also similar to the study done by Bhatti GS et al. (2019) in Punjab.⁴ In our study, we also found that students constituted 11.1% of cases. Considering this fact imparting sex education in school plays an important role in preventing such diseases among

them. Our study revealed herpes genitalis (32.2%) as the most common STI prevalent in our region during COVID times as compared to 26.4% in the previous year. It is similar to studies done by Devi S et al. (32.8%), and Kumar et al. (19.7%).^{5,6}

But in study done by Talukdar K et al.⁷ (2016) in New Delhi showed primary syphilis (17.14%) to be the most common STD, whereas, syphilis was the second most prevalent STD in our study during COVID times, whereas during pre-COVID period mostly women with vaginal discharge (21.4%) presented to our hospital.

The least common were bacterial STD seen both during study period and pre-COVID times in our study. This declining trend in bacterial STDs was thought to be contributed by the syndromic treatment provided to the STD patients by healthcare workers and private practitioners along with the use of broad-spectrum antibiotics by them.

The prevalence in STD is high because it is recurrent and persistent in its nature.

5. Conclusion

Amidst this COVID crisis and lockdown, alteration in the human behaviour was observed. This behaviour was reflected in the number and characteristic of patients attending hospitals for medical care. During the COVID time the number of patients with STD reporting to STD clinic reduced. The attribute of population and the prevalence of each STD was altered as well during the COVID times.

6. Conflict of interest

The authors declare that there is no conflict of interest.

7. Source of Funding


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