Section: DVL

Original Research Article

RETROSPECTIVE STUDY ON CHANGING TRENDS IN SEXUALLY TRANSMITTED DISEASES IN PATIENTS ATTENDING STD CLINIC OF TERTIARY CARE HOSPITAL.

Ithihas. H.S[1], C. Neelima[2], V. Kishore Kumar[3], L. Sreedevi[4], A. Vijaya Kumari[5]

[1]*Post graduate, Department of DVL, Government Medical College, Ananthapur, Andhra Pradesh, India.*
[2]*Assistant Professor, Department of DVL, Government Medical College, Ananthapur, Andhra Pradesh, India.*
[3]*Professor and HOD, Department of DVL, Government Medical College, Ananthapur, Andhra Pradesh, India.*
[4]*Associate Professor, Department of DVL, Government Medical College, Ananthapur, Andhra Pradesh, India.*
[5]*Assistant Professor, Department of DVL, Government Medical College, Ananthapur, Andhra Pradesh, India.*

Received *: 30/01/2025*
Received in revised form *: 20/03/2025*
Accepted *: 05/04/2025*

Corresponding Author:
Dr. C.Neelima,
Assistant Professor, Department of DVL, Government medical college, Ananthapur, Andhra Pradesh, India.
Email: doctorneelimachalla@gmail.com

DOI: 10.70034/ijmedph.2025.2.67

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2025; 15 (2); 372-375

ABSTRACT

Background: STIs pose a major health, social and economic problem worldwide, predominantly in developing countries like India. Aim and objective: To assess the patterns of STIs seen over the past 10 years based on the syndromic approach in a STD clinic of Tertiary care hospital.

Materials and Methods: This is a retrospective study on patients who attended the Department of Dermatology and Venereology STD clinic, Government Medical College, Anantapur, from January 2014 to December 2023. Cases during 2021 was incomplete due to COVID 19, hence excluded. Patients examined clinically and diagnosed based on Syndromic approach.

Results: The most common STDs affected age group was 21–30 years (52.63%), and were female (76.15%), The decreasing trend of STDs except Cervical vaginal discharge, Lower abdominal pain over period was observed. Of all the STDs attending STI clinic, CVD was most common (53.81%), followed by Lower abdominal pain (15.25%), and other STIs (15.71%). The most common STD noted was other STDs like balanoposthitis in males (45.26%) and Cervical vaginal discharge in females (70.61%).

Conclusion: Though decreasing trend in STDs observed, Cervical vaginal discharge and Lower abdominal pain increased. Hence awareness of STIs, early diagnosis and treatment initiation and partner treatment could decrease the burden of STDs.

Keywords: Sexually transmitted infections, Tertiary, Trends.

INTRODUCTION

Sexually Transmitted Diseases (STD) are a global health problem but their prevalence rates are higher in developing countries where STD treatment is less accessible.[1] STDs are commonly more active than other prevailing infection in the community amongst the sexually active population and the epidemiological profile is very distinct.[2]

STDs show various trends in different part of the country and increases the risk of transmission of Human Immuno Deficiency virus (HIV) infection.[3] 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.[4] We aim to study the patterns of STIs seen over the past 10 years based on the syndromic approach.

MATERIALS AND METHODS

This is a retrospective study of patients who attended the Department of Dermatology and

Venereology STI clinic, Government Medical College, Anantapur, from January 2014 to December 2023. Though it's a 10 years retrospective study, due to COVID pandemic data during 2021 was insufficient. Hence excluded. All patients above the age of 15 presented to the STI clinic, and the STI cases referred from the gynaecology outpatient department were included in the analysis. Cases were subjected to detailed history taking and, a thorough clinical examination was performed.

After taking the Ethical committee's permission, patients were categorized as per the NACO guidelines into Genital ulcerative disease-herpetic (GUD-H), Genital ulcerative disease Nonherpetic (GUD-NH), Cervico-vaginal discharge (CVD), Lower Abdominal Pain(LAP), and Urethral Discharge(UD), Inguinal bubo, Ano rectal discharge. In addition, other STIs that do not come under the umbrella of Syndromic management, such as Genital warts, balanoposthitis, anogenital warts (condyloma acuminata) and Genital Molluscum Contagiosum, were included in the study. Syndromic and Clinical Diagnosis was made based on clinical features, examination and laboratory investigation. Gram-stain, KOH preparation, and wet mount were prepared wherever required. Investigations including hemogram, liver and kidney function tests, venereal disease research laboratory (VDRL) for syphilis, hepatitis B virus surface antigen, and antibody for HIV were performed as optout testing after pre-test counselling. The diagnosis of HIV was made on a rapid test and ELISA. Those found positive were offered post-test counselling by an STI counsellor and referred to the ART centre of our hospital. Partner notification and condom promotion were done.

Exclusion Criteria: Cases of genital scabies were excluded from the study considering that it can spread even without sexual contact. Also, cases of HIV without any STI were not included. All the cases included in the study were sexually active as per history.

All the data was entered and analyzed using Microsoft excel sheet. Descriptive statistics for categorical variables like proportions were calculated.

RESULTS

In a retrospective study to assess the burden and trends of STDs in a STD clinic of a tertiary care, we observed that total 34651 cases attended the STD clinic in 10 years period, among which STDs confirmed by syndromic management in 29453 cases (85%). Out of which male were 23.85% and female were 76.15%. Thus, female presented to the clinic morethan men. STD cases gradually decreased till 2020 and post COVID cases started shooting up.(Table 1) STDs in male gradually increased over time till 2022 and suddenly decreased in 2023 while the trend was reverse in female. In female patients STDs was increasing till 2017, then sudden rise in 2018, later decreasing trend till 2022 i.e., lowest cases were recorded, then sudden shoot of cases seen in 2023. This altered trend could be because of awareness in public, population mobility. (Figure 1)

Majority of the patients attending STDs were in the age group of 21 – 30 years(52.63%), followed by 31 – 40 years (23.11%), 41 – 50 years (15.2%), and 51 – 60 years (4.4%) Least number of cases(around 2%) were seen in younger (<20 years) and older age group (>60 years). The youngest patients with STD in our study was 18 years and oldest being 67 years.(Figure 2)

Over the years it is observed by the trends that the STDs diagnosed by symptomatic syndromic management were showing wide fluctuations, mostly decreasing trend till COVID 19 pandemic. Inguinal bubo and anorectal discharge cases were very less. Post covid except Vaginal / Cervical discharge and lower abdominal pain all other cases showed increasing trend. In 2022, vaginal discharge cases suddenly decreased but again increased tremendously in 2023. Contrary to this Other STDs like balanoposthitis, molluscum contagiosum, scabies, pediculosis pubis suddenly increased in 2022, again decreased in 2023. All other STDs were almost decreased comparatively over the years. (Figure 3)

Of all the STDs attending STI clinic, CVD was most common (53.81%), followed by Lower abdominal pain (15.25%), and other STIs (15.71%). Anorectal discharge and Inguinal bubo were very minimal. Among female, Vaginal / cervical discharge(CVD) is the single most common STD (70.61%), followed by lower abdominal pain in 20%. Among men, other STDs are most common (45.26%) comprising nearly half of the cases followed by Urethral discharge in 24.4% and Herpetic ulcer in 19.78%. (Figure 4).

Table 1: Gender wise distribution of STD cases in the STD clinic

Year	Male	Female	Total episodes
2014	726(30.4%)	2385(69.6%)	3111
2015	741(28.6%)	2594(71.4%)	3335
2016	806(30%)	2688(70%)	3494
2017	859(37.2%)	2312(62.8%)	3171
2018	802(32.2%)	2492(67.8%)	3294

2019	775(37.6%)	2062(62.4%)	2837
2020	327(38.1%)	859(61.9%)	1186
2022	877(42.9%)	2043(57.1%)	2920
2023	1113(22.3%)	4992(77.7%)	6105
Total	7026(23.85%)	22427(76.15%)	29453

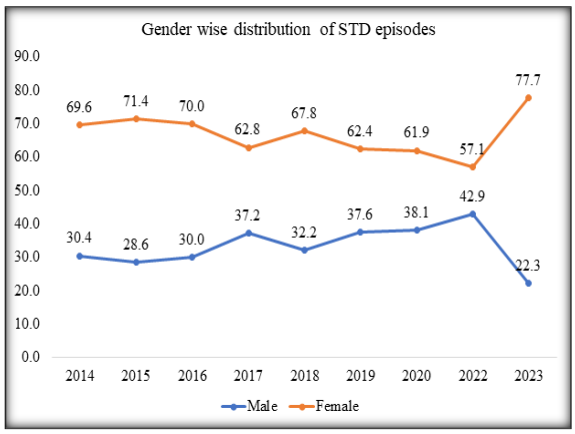

Figure 1: Trends of Gender wise distribution of STD cases in the STD clinic

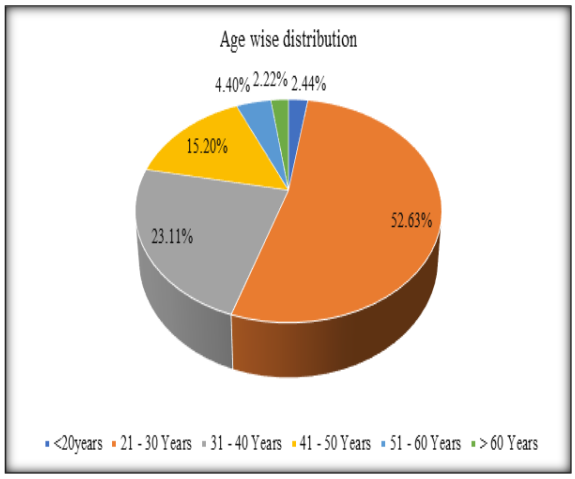

Figure 2: Age wise distribution of STD cases

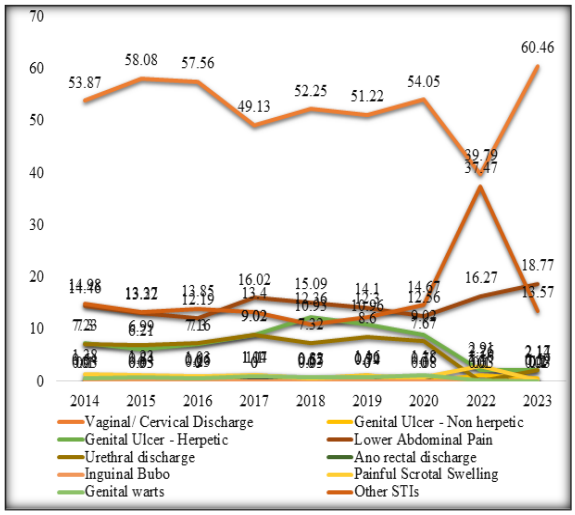

Figure 3: Trends of STD cases

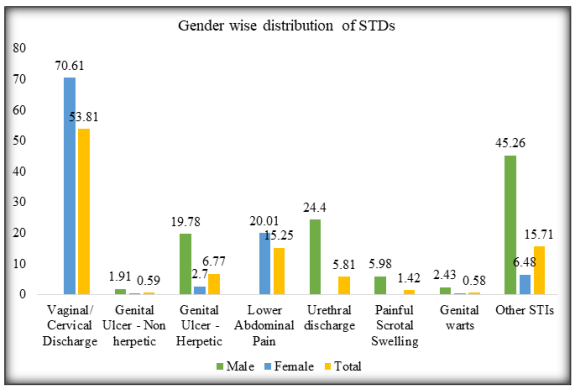

Figure 4: Gender wise distribution of STDs by Syndromic approach

DISCUSSION

STIs are responsible for a significant proportion of abortion, stillbirths and infertility in both sexes and increase susceptibility to HIV infection. Moreover, apart from medical problems, it causes significant social stigma & economic loss to the family. So, it is foremost important for early diagnosis, appropriate treatment, and preventive measures to reduce further burden.[5] STI cases are frequently underreported because of societal stigma and a lack of awareness, and they are frequently misdiagnosed because of a lack of testing resources and healthcare facilities. This highlights the necessity of ongoing monitoring of the prevalence and trends of STIs across the nation. Planning and executing healthcare interventions to manage HIV and STIs is aided by the analysis of demographic profiles and current trends of various STIs.[6] In our study, we observed that STDs prevalence was 85% which was similar to other study by Agarwal etal.[7] The age groups of 21–30 and 31–40 years old accounted for the majority of STI cases, and they were also the most common age groups found to have STIs in other Indian studies.[3-10] Since they often have more sexual partners and switch partners more frequently than older age groups, being the most sexually active age group they are more susceptible to STI acquisition.

Out of the STDs diagnosed by Syndromic management, 23.85% were male and 76.15% female. Thus, female with STD were morethan male. Similarly 33.4% were males and 66.6% were females with male-to-female ratio being 1:1.9 according to Agarwal P etal.[7] Although the epidemiology of STIs is male dominated as seen in most of the other studies,[2,6,10] there is a gradual trend toward an increase in female attendees in STI clinic as evident in previous studies.[4,11] This could be attributed to effective contact tracing, spouse screening, and improved health care-seeking

behavior in women, thanks to increasing female literacy rate.[8]

Over ten years period we observed that except Cervical or vaginal discharge and lower abdominal pain all other STDs have gradually decreased over time. Even CVD and LAP are also slightly increased comparatively. Post covid era, Other STDs increased tremendously which again dropped to the usual levels in 2023. The study done by Bobita Boro etal shows a decline in the number of patients with Cervico-Vaginal Discharge over the years. This may be attributed to Syndromic management by peripheral Health workers and increases awareness among females for attending STI clinics. The total number of STI cases showed a gradual decline by many studies. There was a variation with a lower incidence of cases could be due to ethnic conflict resulting in low patient attendance. Overall declining trends of STIs could be accredited to the better diagnostic and management facilities by active NACO intervention.[5]

The most common STI during the study period was cervical/vaginal discharge(53.81%), Other STIs (Balonopthitis) and Lower abdominal pain which was consistent with other studies.[7,9] The most commonly observed STI was balanoposthitis (37.8%), followed by cervico-vaginal discharge (24.5%), GUD-herpetic (17.346%) according to Rathi etal.[6]

In our study among female, Vaginal / cervical discharge is the single most common STD (70.61%), followed by lower abdominal pain in 20% whereas among men, other STDs like Balonophthitis are most common (45.26%) comprising nearly half of the cases followed by Urethral discharge in 24.4% and Herpetic ulcer in 19.78%. In our study vaginal discharge cases were very high compared to other studies as the cases were referred from Obstetrics Gynaecology department mostly. Similarly, Nanjundaswamy etal and Rathi etal in their study observed that the most common STD in males was balanoposthitis and in females was vaginal/cervical discharge.[6,11] In the study done by Mendiretta etal and Nyati etal, Genital herpes was the most common STD among men.[4,9]

The current study's limitations include the fact that many cases were diagnosed using a syndromic method and clinical examination, and that not all of the cases were verified by additional confirmatory procedures such as microscopy, culture, and histopathology.

CONCLUSION

In our study, majority of the STDs occurred in 21 – 40 years, who are sexually active and in female. Decreasing trends of STDs were observed. Early diagnosis and management of STIs is the most necessary measure to decrease the burden of STIs and prevent HIV transmission. Therefore, the most fruitful way to control it would be to lower its incidence by promoting health education regarding safer sex, barrier contraception, and single partner adherence.

Financial support and sponsorship: Nil.

Conflicts of interest: There are no conflicts of interest.

REFERENCES

1. Subhashini C, Suryanarayana G, Balachandrudu B. Pattern of Sexually Transmitted Infections in King George Hospital, Visakhapatnam. J Evol Med Dent Sci. 2017;6(21):1659–1661.
2. Arakkal G, Damarla S, Kasetty H, Chintagunta S. Changing trends in sexually transmitted infection (STI) clinic attendees – Current scenario. Int J Med Sci Public Health.2014;3:1215–1215.
3. Narayanan B. A retrospective study of the pattern of sexually transmitted diseases during a ten-year period. Indian J Dermatol Venereol Leprol. 2005; 71:333.
4. Nyati A, Gupta S, Jain SK, Yadav D, Patidar BL, Sharma M. A retrospective study of the pattern of sexually transmitted infections from a tertiary care hospital of Rajasthan. Indian J Sex Transm Dis 2017; 38:147-51.
5. Dutta B, Boro B, Mazumdar S. A retrospective study of the pattern of sexually transmitted infections of patients attending at Dermatology department of a tertiary care Hospital, Assam. Int J Med Rev Case Rep. 2022; 6(9): 47-52. doi:10.5455/IJMRCR.172-1641390989
6. Rathi S, Hajare SA, Jaiswal S, Agrawal S, Kherde A, Mishra D.Pattern of Sexually Transmitted Infections: A Retrospective Study from a Tertiary Care Hospital in Central India.J Clin of Diagn Res.2021; 15(1):WC01-WC04.
7. Agarwal P, Saikia S, Jagati A, Gajjar K, Vadher P, Patel S. Pattern of sexually transmitted infections at a tertiary care center of Western India: A 12-years retrospective study. Indian J Sex Transm Dis 2021; 42:184-5.
8. S Abarna Devi, T P Vetrichevvel, Gajanan A Pise, Devinder Mohan Thappa. Pattern of sexually transmitted infections in a tertiary care centre at Puducherry. Indian J Dermatol 2009:54(4):347-9.
9. Mendiratta V, Meena AK, Verma D. Epidemiology and changing trends of sexually transmitted diseases over the past 17 years in a tertiary care center: A retrospective study. Indian J Sex Transm Dis 2023; 44:152-7.
10. Goel S, Chopra D, Choudhary V, Riyat A, Chopra S. Changing trends of sexually transmitted infections and estimation of partner notification at a tertiary care center in North India. Indian J Sex Transm Dis 2020; 41:176-80.
11. Nanjundaswamy B L , Surendran K A K , Sathish S , Setty NKH, Chandrakumar L. Changing trends in sexually transmitted diseases during a seven year period- A retrospective study in STD clinic of a tertiary care hospital. IP Indian J Clin Exp Dermatol 2020;6(1):35-40.