



TRENDS OF SEXUALLY TRANSMITTED INFECTIONS AMONG PATIENTS ATTENDING STD O.P. IN A TERTIARY CARE CENTER IN SOUTH INDIA: A RETROSPECTIVE STUDY

Medical Science

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ABSTRACT

Introduction: Sexually transmitted infections (STIs) show varying prevalence in different parts of the country. Due to easy availability of antibiotics and changing sexual behaviors there has been a change in the trend of STIs.

Aim : To assess the clinical trend of STIs among the patients attending the Sexually Transmitted Diseases O.P. in a tertiary care center.

Materials and Methods: A Retrospective Observational Study of 82,292 patients from January 2012 to December 2019 (8 years) was done. Detailed history, physical examination, and other appropriate investigation results were noted.

Observations: Among the study group 60% were males, 39.7% were females and 0.3% were Transgenders. HIV positivity was most prevalent in the age group of 35-49 years (50%). HIV positivity showed a declining trend and has decreased by 43.7% in 2019 compared with 2012. Most common STI among males was syphilis (19%) followed by Anogenital warts (7%). Most common STI among females was Vaginal and Cervical Discharge (VCD) (76%) followed by Syphilis (4%).

Conclusion: Our study showed a declining trend of all STIs with exception of vaginal and cervical discharge in females and syphilis in males.

KEYWORDS

Changing trends, Sexually Transmitted Infections, Syphilis, HIV

INTRODUCTION

Sexually transmitted infections (STIs) including Human Immunodeficiency Virus (HIV) are a major public health problem in India and in other developing countries. The pattern of different diseases is dynamic, varying according to the geographic distribution, socio economic cultures and practices, differing in each country and also in different parts of the country like India due to its secular nature. STIs lead to an increase in the transmission of HIV infection. Similarly HIV infection impacts on the course of various STIs diversely leading to altered clinical presentation, altered treatment response and recurrence of STIs. Therefore it becomes necessary to understand the pattern of STIs prevailing in the different regions of the country for proper planning and implementation of STI control strategies. With the availability of data on the epidemiology of STIs it becomes pragmatic for the designing, implementing, and monitoring successful targeted interventions.

Aim:

To assess the clinical trend of STIs among the patients attending the Sexually Transmitted Diseases O.P. (STD O.P) in a tertiary care center.

Materials & Methods:

A Retrospective Observational study by secondary data analysis of the data collected from all the patients who visited STD O.P. of Institute of Dermatology Venereology Leprosy, Rajiv Gandhi Government General Hospital, Chennai over a 8-year period from January 2012 to December 2019 was done.

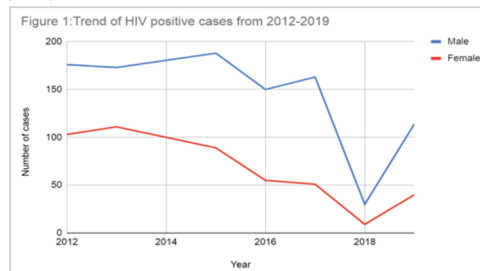
Diagnosis like Genital Herpes, Syphilis, Anogenital Warts, Urethral discharge, Vaginal and cervical discharge (VCD), Lower abdominal pain (LAP), Chancroid were made on the basis of patient history, clinical examination and relevant investigations. Dark field microscopy, Gram-stain, Tzanck smear, KOH preparation, wet mount and culture were performed for relevant cases. Blood Investigations including Venereal Disease Research Laboratory (VDRL) & Treponema pallidum hemagglutination test (TPHA) for syphilis was done. Diagnosis of HIV was made with appropriate pretest and posttest counseling using a series of rapid tests and patients were referred to ART centers if found positive. Partner notification, screening and condom promotion were done routinely.

Results:

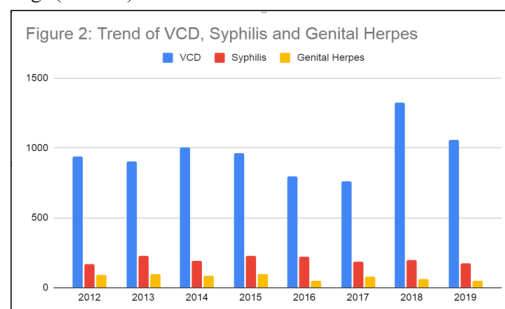
Out of total 82,292 patients who attended the STD O.P. 49,440 (60%) were males, 32,665 (39.7%) were females and 187 (0.3%) were Transgenders. Among them majority were Unemployed / Retired (31%) followed by Homemakers (13%), Non Agricultural laborers (9.53%), Agricultural laborers (9.31%) and Students (5.27%).

Among the total 1217 HIV positive cases, 967 were males (79.5%), 246 females (20.2%) and 4 Transgenders (0.3%). Percentage of HIV positivity among the screened was highest among the transgenders (2.13%) followed by males (1.96%) and females (0.75%). The trend of HIV positivity over the years (2012-2019) is shown in **Fig:1**.

Despite the increase in HIV screening to 51.85% in comparison with 2012, HIV positivity showed a declining trend and has decreased by 43.7% in 2019 compared with 2012. HIV positivity was most prevalent in the age group of 35-49 years (50%) followed by 25-34 years (37%).



Most common overall STI was Vaginal and cervical discharge (VCD) (46%) followed by syphilis (10%). The trend of STIs over the years is shown in **Fig:2**. Most common STI among males was syphilis (19%) followed by Anogenital Warts (7%), Genital Herpes (6.5%) & Urethral Discharge (3%). Most common STI among females was Vaginal and Cervical Discharge (VCD) (76%) followed by Syphilis (4%), Lower Abdominal Pain (LAP) (3%) and Genital Herpes (2%). Other STIs were Inguinal Bubo (0.21%), Chancroid (0.14%) and Ano rectal discharge (0.023%).



There was a declining trend of all STIs with exception of VCD in females and syphilis in males which have shown an upward trend with the increase being 12% for VCD and 6% for Syphilis from

2012 to 2019. The decrease in percentage of other STIs in 2019 when compared with 2012 was Chancroid (90%), LAP (72%), Urethral discharge (62%), Genital Herpes (48%) & Genital Warts (37%).

Discussion:

HIV and STIs pose a major burden on the health system as well as on the population due to the mortality, morbidity and stigma associated with them. According to NACO 2019 estimates, India is estimated to have around 23.49 lakh HIV cases with varying state wise prevalence^[1]. In our study the prevalence of HIV was 1.47% which is significantly higher than Tamil Nadu's 2019 HIV prevalence 0.23%^[1]. This can be attributed to the higher screening of HIV suspects in our Institute compared to population studies. Still the prevalence is low compared to similar previous studies done in other parts of the country 3.6% by Nyati et al, 2017^[2] 2.55 by Sharma et al, 2015^[3] and 2.48 by Vora et al, 2011^[4]. This is attributable to the local factors including educational status, number of sexual partners, sexual orientation, knowledge of STI, and their prevention activities. HIV positivity showed a declining trend by 43.7 % from 2012 to 2019 which is comparable to nationwide estimates by NACO, 37% from 2010 to 2019^[1]. The male to female ratio of HIV cases in our study was 3.9:1 which is in concordance with a similar study by Sharma et al^[3], ratio being 3.5:1. HIV positivity was most prevalent in the age group of 35-49 years (50%) followed by 25-34 years (37%) which was similar to other studies done by Vora et al^[5] & Zeeshan^[6] as STIs are predominantly found in sexually active age groups.

Most common STI overall was Vaginal and cervical discharge (VCD) (46%) which is in concordance with studies by Goel et al^[7], Nyati et al^[2] & Vora et al^[5]. Next common STI in our study was Syphilis (10%). This is in contradiction to studies done by Goel et al,^[7] Nyati et al,^[2] Sharma.S. et al^[3] which showed high prevalence of Genital herpes & Anogenital warts. This can be partly attributed to regular syndromic approach followed in those study population compared to etiological diagnosis of early and late syphilis by specific investigations done in our study.

Most common STI among males was syphilis (19%) followed by Genital warts (7%), Genital Herpes (6.5%), Urethral Discharge (3%) which is in contradiction to studies done by Nyati et al^[2] and Vora et al^[4] which reported viral STIs like Genital herpes followed by genital warts as the most common STI and balanoposthitis in studies done by Sharma et al^[3] and Goel et al^[7].

Most common STI among females was Vaginal Cervical Discharge (VCD) (76%) followed by Syphilis (4%), Lower Abdominal Pain (3%), Genital Herpes (2%) whereas studies done by Goel et al^[7], Nyati et al^[2] & Sharma et al^[3] reported Vaginal Cervical Discharge as most common STI followed by viral STIs.

Most common STI related causes of VCD in our study were candidiasis, bacterial vaginosis and trichomoniasis which is similar to Vora et al^[5] and Goel et al^[7] studies. Hence diabetic screening, prevention of unnecessary antibiotic usage, personal hygiene, partner screening has to be insisted for all female patients.

There is a declining trend of all STIs including HIV over the years with exception of VCD in females which has shown an upward trend as in Vora et al^[5] study and syphilis in males which have shown an upward trend in our study. Marked decline in bacterial STIs and an apparent increase of viral STIs has been reported from various Indian studies like Nyati et al^[2], Goel et al,^[7] Vora et al^[4], Devi.SA et al^[8] & Jian.VK et al.

But syphilis still has shown an increase of 6% in our study. Other STIs like Urethral discharge, Anorectal discharge, Lower abdominal pain, Inguinal bubo have shown a declining trend as in Nyati et al^[2], Goel et al,^[7] Vora et al^[4], Devi.SA et al^[8], Jian.VK et al^[9] and Chandragupta. TS et al^[10] studies which can be attributed to as improved primary health care, increase in sexual health awareness, knowledge & treatment about the diseases among public.

Conclusion:

Our study showed a declining trend of all STIs with exception of Vaginal Cervical Discharge in females and syphilis in males which have shown an upward trend. Hence regular screening, early diagnosis, appropriate treatment, partner notification, regular follow up & counseling for risk reduction behavior in high risk individuals has

to be followed at all health sector levels.

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