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Epidemiology of STIs among South Indian men

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Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

An observational study was conducted among male patients attending an STD clinic at our tertiary care Centre. Our study yielded important prevalence data of various STIs. Herpes genitalis was seen in 35% of cases, Gonococcal urethritis in 20% of cases, genital warts in 13% of cases, Primary syphilis in 12% of cases, Molluscum contagiosum in 11% of cases, HIV in 10% of cases, Candi dial BP in 10% of cases, Secondary syphilis in 9% of cases, Genital scabies in 7% of cases, Non-Gonococcal or Chlamydia Trachomatis in 5% of cases, HBV in 1% of cases, and Co existing STIs were seen in 13 % of cases. Viral infections predominating with 74% of cases, bacterial STIs followed with 46% of cases, fungal being the least common with 2% of cases, and prevalence of Parasitic STIs were among 7% of the total. We have put our efforts to identify the changing trends in sexually transmitted infections in men who serve as an important source of transmission in the community.

Keywords: Prevalence, Viral, bacterial, fungal, parasitic STIs

Introduction

In the present scenario sexually transmitted diseases (STDs) are the most common notifiable infectious diseases in the world. They contribute to one of the crucial public health problems, and persist to pose great health, social, and economic burden to third world nations like India, leading to not only morbidity but also deaths. Statistics as per the World Health Organization (WHO) more than one million people contract a sexually transmitted infection (STI) every single day worldwide[1]. It is analysed that somewhere around 300 lakhs of new cases of STI/RTI (reproductive tract infection) are

diagnosed every year in India's represented by Indian Counsel for Medical research (ICMR).[2]

Materials and Methods

The present study was conducted to study the prevalence of different STIs among men who attend STD clinic in Guntur Medical College and Hospital.

Study design

Observational study.

Study period

February 2021 to August 2022 (18 months).

Sample size

100 Patients.

Sample size (n) = $(1.96)^2pq/d^2$

P= Prevalence =8% according to Thapar R et al.[50]

q=100-p=100-8= 92%

d=absolute precision=6%

Sample size (n)=78.5, which was rounded to 100.

Selection of the patients

Male patients attended STD clinic at the Department of DVL, Guntur Medical College and Hospital, Guntur were selected. Simple random sampling was used for selection of patients.

Inclusion criteria

1. Male patients of age 18 years or older
2. Patients attending STD clinic
3. Patients willing and able to give informed consent to participate in study

Exclusion criteria

1. Patients below 18 years
2. Patients not willing for study
3. Patients who have already taken treatment

Ethical issues

1. Obtaining consent for interview and examination.
2. Obtaining consent for collection and storage of images of patients
3. Maintenance of confidentiality is taken care of.
4. The doubts of the patient will be answered to avoid any confusion.
5. The academic purpose behind the study will be explained to the patients and then enrolled
6. The patients can withdraw from study anytime during the process.
7. No animal experiments are done

Methodology

An open, observational and cross-sectional study was conducted. All male patients attended STD clinic were asked for chief complaints, past history and undergo thorough clinical examination.

The following characteristics were considered for analysis

(1) Demographic information: Age, education, occupation and marital status;

(2) Sexual history and

(3) Clinical information: Complaints at the time of presentation, duration and any treatment taken for the complaints. Screening for HIV and Syphilis was done.

Specific investigations like urethral swab for gram stain, Tzanck smear, wet mount, KOH mount, first pass urine (FPU) and two glass urine tests were done when indicated.

Other tests like Hepatitis B, C, HSV serology and blood sugar were also done to substantiate history and finding.

Genital examination- following all standard protocols and precautions genitalia were examined. Lesions like ulcers, erosions, growths, swellings, discharge in the inguinal region, penis, scrotum will be inspected and palpated for appropriate description and classification.

Clinical information and investigation results obtained was analysed and extrapolated to reveal the prevalence of various STDs from this study.

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Statistical analysis

Data was entered into Microsoft Excel (Windows 10) and analysis was done using the Statistical Package for Social Sciences (SPSS version 25.0; Chicago). For statistical analysis, Chi square test was applied and P-value <0.05 was taken as statistically significant.

Results

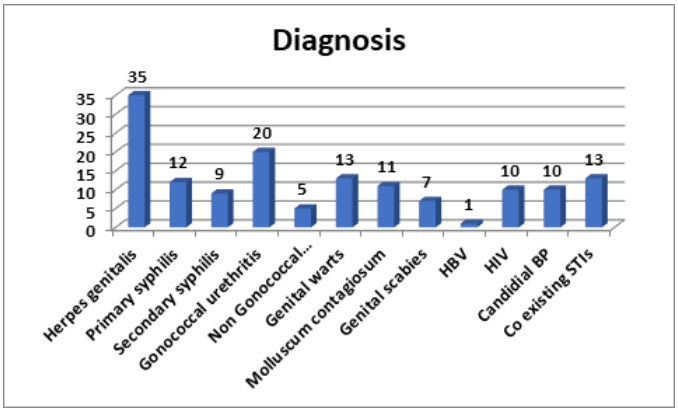
Prevalence of STIs

Herpes genitalis was seen in 35% of cases, Gonococcal urethritis in 20% of cases, genital warts in 13% of cases, Primary syphilis in 12% of cases, Molluscum contagiosum in 11% of cases, HIV in 10% of cases, Candi dial BP in 10% of cases, Secondary syphilis in 9% of cases, Genital scabies in 7% of cases, Non-Gonococcal or Chlamydia Trachomatis in 5% of cases, HBV in 1% of cases, and Co existing STIs were seen in 13 % of cases.

Table 1: Diagnosis

Diagnosis	Frequency	Percentage
Herpes genitalis	35	35
Gonococcal urethritis	20	20
Genital warts	13	13
Primary syphilis	12	12
Molluscum contagiosum	11	11
Candi dial BP	10	10
HIV	10	10
Secondary syphilis	9	9
Genital scabies	7	7
Non-Gonococcal or Chlamydia Trachomatis	5	5
HBV	1	1
Co-existing STIs	13	13

Figure 1: Diagnosis



Type of infection

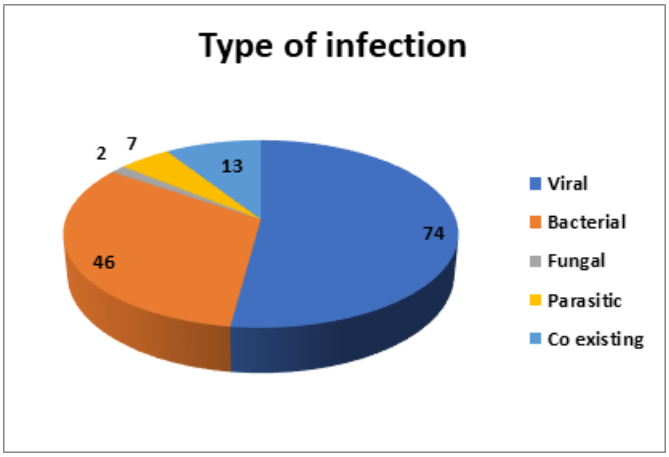
Viral infections were seen in 74% of cases, bacterial in 46% of cases, fungal in 2% of cases, Parasitic in 7% cases and Co existing infections were seen in 13% of cases.

In this study, viral infections were seen in 74% of cases, which was higher than Banger H S et al.[12] (38.5%).

Table 2: Type of infection

Type of infection	Frequency	Percentage
Viral	74	74
Bacterial	46	46
Fungal	2	2
Parasitic	7	7
Co-existing	13	13

Figure 2: Type of infection



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Discussion

The present study was conducted to study the prevalence of different STDs among 100 men who attended STI clinic in Guntur Medical College and Hospital, the following features are identified to be contributing factors to subject of interest.

- In this study, extra marital relationship was present in 63% of cases, absent in 11% of cases.
- In this study, majority of cases had first sexual encounter at 26-30 years (41%), followed by 21-25 years (35%), 31-35 years (14%), and ≤20 years (10%).
- In this study, majority had multiple sex partners (66%), followed by 2 partners (24%), and single sex partner was reported by 10% of cases.
- In this study, 26% of cases seek healthcare from Specialist, 38% of cases from non-specialist and 36% of cases from unqualified.
- Regarding H/o STIs, in 5% of cases recurrent Herpes Genitalis, in each 2% of cases genital warts, syphilis, and in each 1% of cases, primary chancre, Syphilis, and Recurrent Herpes Genitalis, Gonococcal Urethritis, and Non-Gonococcal or Chlamydia Trachomatis.
- Herpes genitalis was seen in 35% of cases, Gonococcal urethritis in 20% of cases, genital warts in 13% of cases, Primary syphilis in 12% of cases, Molluscum contagiosum in 11% of cases, HIV in 10% of cases, Candi dial BP in 10% of cases, Secondary syphilis in 9% of cases, Genital scabies in 7% of cases, Non-Gonococcal or Chlamydia Trachomatis in 5% of cases, HBV in 1% of cases, and Co existing STIs were seen in 13 % of cases.

Conclusion

From the current study it has been observed that viral STIs were more prevalent compared to bacterial, fungal or parasitic agents. As most viral infections are incurable and may have grave consequences it is imperative to adopt preventive measures to curb disease transmission. Our study also emphasized the presence of co-existing STIs drawing attention to how presence of one type of infection makes an individual vulnerable for acquiring other more serious diseases. Safe sex, limited number of partners, correct & consistent use of condoms, awareness, de-stigmatizing, early intervention serves as bed rock along with equal participation of healthcare workers and public in planning and implementing strategies to lower STDs prevalence and alleviate their burden on our society.

Clinical photographs

Fig 1: Perianal warts in a MSMulceration in HIV positive individual.

Fig 2: Herpes genitalis -extensive perianal.

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Fig 3: Genital scabies showing burrow

Fig 4: Gonococcal urethritis

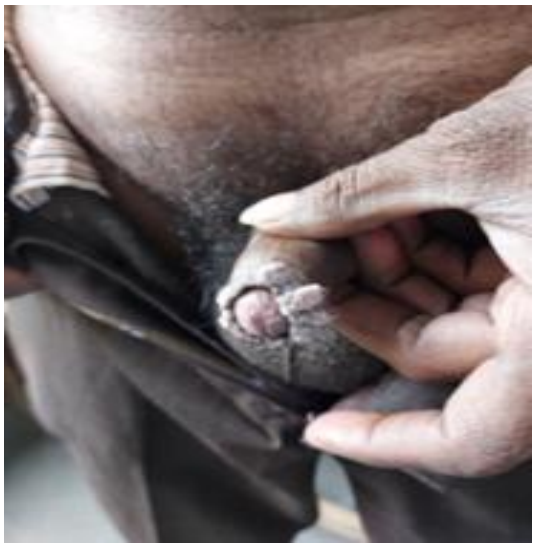

Fig 5: Genital warts.

Fig 6: Candidial balanoposthitis.

Fig 7: Rash in a patient with secondry syphilis.

Fig 8: Condyloma Lata of Secondary syphilis.

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