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BURDEN AND CLINICAL SPECTRUM OF SEXUALLY TRANSMITTED INFECTIONS IN YOUNG ADULTS AT A TERTIARY CARE DERMATOLOGY OPD

Dermatology

Dr.Prabhat Kumar MBBS, MD(HOD &Associate Professor Department of Dermatology, venereology & leprosy,RIMS Ranchi

Dr. Vejeta Rani MBBS, MD(Senior Resident,Department of Dermatology, venereology & leprosy,RIMS Ranchi

Dr. Surbhi Baghel* MBBS(Junior Resident,Department of Dermatology, venereology & leprosy,RIMS Ranchi*Corresponding Author

ABSTRACT

Background: Sexually transmitted infections (STIs) pose a significant public health challenge worldwide, especially among young adults. According to the WHO, nearly half of the 370 million new STI cases annually affect this demographic. STIs not only impact reproductive health but also increase susceptibility to HIV and other comorbidities. In India, understanding regional epidemiological trends is crucial for developing effective prevention and treatment strategies. **Objective:** To determine the prevalence and clinical spectrum of STIs in young adults (18–35 years) attending the dermatology OPD of a tertiary care center and to assess demographic and behavioral factors associated with STI occurrence. **Methods:** This observational cross-sectional study was conducted over one year at the Dermatology OPD, RIMS, Ranchi. Participants aged 18–35 years with clinically suspected STIs were enrolled after informed consent. Data collection included demographic details, sexual behavior, and clinical findings. Laboratory investigations such as VDRL, HIV testing, gram stain, culture, and PCR were performed. Statistical analysis was conducted using SPSS v30.0. **Results** (Expected):A total of 790 young adults were diagnosed with STIs. The most prevalent condition was scabies (38%), followed by fungal infections like vaginal candidiasis and candidal balanoposthitis. Bacterial STIs such as syphilis, gonococcal urethritis, and non-gonococcal urethritis were less common but clinically significant. Viral STIs, including genital herpes, genital warts, HIV, and molluscum contagiosum, accounted for a smaller but important portion due to their chronicity and public health implications. **Conclusion:** This study highlights the diverse etiology and burden of STIs among young adults. Findings will contribute to improved STI surveillance, targeted health education, and policy development, especially in resource-limited settings.

KEYWORDS

sexually transmitted infections, young adults, sexual health, awareness

INTRODUCTION

According to the World Health Organization (WHO), an estimated 370 million new sexually transmitted infections (STIs) occur globally each year, with nearly half affecting young individuals (1). Understanding regional STI patterns is essential for planning effective control strategies (2). Individuals with STIs are more vulnerable to HIV infection and contribute to its further transmission (3,4). Research highlights a strong synergy between bacterial STIs and HIV, especially among high-risk groups such as men who have sex with men (MSM), transgender individuals (TG), injecting drug users (IDUs), and female sex workers (FSWs) (2,5). WHO identifies over 30 sexually transmissible pathogens, with eight being major causes of STIs. STIs are primarily spread through unprotected vaginal, anal, or oral sex. In FSWs, syndromic diagnosis commonly reveals herpetic and non-herpetic genital ulcers, cervical and vaginal discharge, inguinal buboes, and anorectal discharge. STIs/RTIs adversely affect reproductive health through infertility, malignancies, and pregnancy complications, while also facilitating HIV transmission (1,2,6).

Understanding the burden and clinical spectrum of STIs in this demographic is crucial for the development of targeted interventions, effective health education programs, and better resource allocation. Furthermore, documenting local epidemiological trends can help in early identification of emerging patterns, such as increasing antimicrobial resistance or the resurgence of certain infections like syphilis or genital herpes.

This observational study aims to fill this knowledge gap by analyzing the prevalence, types, and clinical features of STIs among young adults attending a tertiary care dermatology OPD. The findings are expected to inform clinicians, public health officials, and policymakers, thereby contributing to more effective STI control strategies.

MATERIALS AND METHODS

Study Design- Observational cross-sectional.Study Setting-Dermatology outpatient department, RIMS, Ranchi. Study Duration-1 year.Study Population- Young adults aged 18 to 35 years attending the dermatology OPD during the study period. Inclusion criteria-1.Patients aged 18-35 years.2.Patients providing informed consent.3.Patients with clinical features suggestive of sexually transmitted infectionsExclusion criteria-1.Patients unwilling to participate.2.Patients with non- sexually transmitted infections dermatological conditions.3. Patients already on treatment for sexually transmitted infections initiated elsewhere without a confirmatory diagnosis.

STUDY PROCEDURE

Participants were recruited from the STI clinic after obtaining informed consent. Data were collected using a structured proforma, including Demographic details, sexual behavior, condom use, and past STI history . A complete general and systemic examination was done for assessment for signs suggestive of STIs.Local genital examination was conducted to identify signs suggestive of specific STIs (e.g., ulcers, discharge, warts, rash).Extra-genital findings were noted if present. Laboratory investigations : VDRL, HIV, Gram stain, culture, and PCR were done All findings were recorded systematically. Data were analyzed using SPSS v30.0. Descriptive statistics were used to estimate prevalence. Chi-square or Fisher's exact test assessed associations and analysis.

RESULT

A total of 790 young adult patients aged between 18 and 35 years were diagnosed with sexually transmitted infections (STIs) during the study period. The demographic distribution of these cases is presented below:

Gender-wise Distribution

Out of the 790 patients, 410 (51.9%) were male, 370 (46.8%) were female, and 10 (1.3%) identified as transgender. This indicates a slight male predominance in STI presentation among young adults attending the dermatology OPD.

Age-wise Distribution

The age group most affected was 23–27 years, comprising 250 (31.6%) cases, followed by the 28–31 year group with 210 (26.6%) cases. The 18–22 year group accounted for 190 (24.0%), while the 32–35 year group had 140 (17.8%) patients. This highlights a higher burden of STIs in the mid-twenties, possibly linked to peak sexual activity and risky behaviors.

Area-wise Distribution

A greater number of STI cases were reported from urban areas, with

460 (58.2%) cases, compared to 330 (41.8%) from rural areas. This urban predominance may reflect better healthcare accessibility and increased health-seeking behavior among urban youth, though lifestyle and exposure differences may also contribute.

STI TYPE DISTRIBUTION

Among the diagnosed STIs:
Scabies was the most common condition, reported in 300 (38%) patients.

Fungal infections were also prevalent, with 200 cases of vaginal candidiasis and 70 cases of candidal balanoposthitis.

Bacterial STIs included syphilis (70 cases), gonococcal urethritis (10 cases), and non-gonococcal urethritis (20 cases).

Viral STIs included genital warts (50 cases), herpes genitalis (20 cases), HIV (10 cases), and molluscum contagiosum (20 cases), showed lower incidence; however, they are noteworthy for their chronic course, potential for recurrence, and long-term health implications. The data underscore the diverse etiologies of STIs in young adults, highlighting the need for comprehensive diagnostic and preventive strategies.

Non-herpetic genital ulcers were observed in 20 patients.

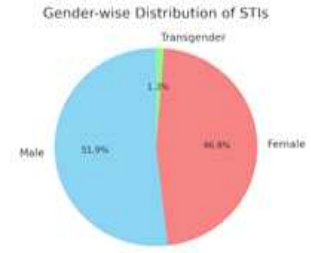
This spectrum emphasizes the varied etiology of STIs, with a noticeable burden of both classical and non-classical infections. Notably, scabies and fungal infections—though not always classified strictly as STIs—were common due to their mode of transmission involving close skin-to-skin or mucosal contact.

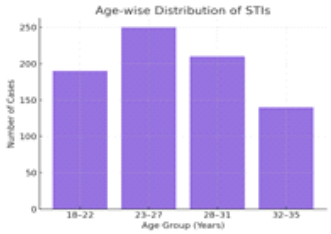
STI Type	Number of Cases
Scabies	300
Vaginal Candidiasis	200
Syphilis	70
HIV	10
Herpes Genitalis	20
Candidal Balanoposthitis	70
Genital Warts	50
Genital Ulcer (Non-herpetic)	20
Gonococcal Urethritis	10
Non-gonococcal Urethritis	20
Molluscum Contagiosum	20

Area of Residence	Number of Cases	Percentage (%)
Urban	460	58.2%
Rural	330	41.8%
Total	790	100%

Gender	Number of Cases	Percentage (%)
Male	410	51.9%
Female	370	46.8%
Transgender	10	1.3%
Total	790	100%

Age Group (Years)	Number of Cases	Percentage (%)
18–22	190	24.0%
23–27	250	31.6%
28–31	210	26.6%
32–35	140	17.8%
Total	790	100%





DISCUSSION

The high prevalence of scabies and candidiasis highlights the need for public awareness regarding personal hygiene and the role of close contact transmission. The presence of classical STIs like syphilis, herpes, and gonorrhea underscores the continued risk of traditional STIs, especially in sexually active young adults. Behavioral factors such as inconsistent condom use, multiple partners, and delay in seeking treatment may contribute to these findings. The relatively lower number of HIV cases is encouraging but warrants continuous vigilance and preventive education.

CONCLUSION

This study reveals a significant burden of STIs among young adults attending dermatology OPD. The findings emphasize the importance of targeted screening, early diagnosis, and public health education, particularly among the sexually active youth. There is a need to reinforce sexual health awareness, safe sex practices, and timely healthcare access.

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