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RESEARCH ARTICLE
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PREVALENCE OF CO INFECTION IN PEOPLE LIVING WITH HIV ATTENDING STI CLINIC AT TERTIARY CARE HOSPITAL, HYDERABAD TELANGANA

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ABSTRACT

INTRODUCTION: HIV remains a major global public health issue, having claimed an estimated 42.3 million lives till date. Transmission is ongoing in all countries globally According to NACO Sexually transmitted infections (STI) rank among the top five conditions for which sexually active adults seek health care in the developing countries. As per the community based STI/RTI prevalence study over 6% of the adult population in India suffers from one or the other STI/RTI episode annually. Presence of a STI/RTI in the sexual partner increases the risk of acquisition of HIV from an infected partner by 8-10-fold Effective control of STI/RTI is a strong and most cost-effective strategy for reducing/preventing transmission of HIV.

METHODS: Patient were screened and detailed history was taken. Appropriate samples were collected based on patient complaints such as serum for screening for HIV, HBsAg, HCV, HSV (rapid and ELISA) Syphilis (TPHA &VDRL) , discharge from abscess in suspected cases of herpes simplex virus (HSV) or varicella-zoster virus (VZV).

RESULTS: During the study period of 6 months from January 2024 to June 2024 a total of 610 patients living with HIV visited the STI clinic with symptoms of STI. Comprehensive analysis and testing revealed Disease of bacterial aetiology syphilis in 116(19.01%); Diseases of viral aetiology: HBsAg positive in 18(2.9%), HCV positive in 2(0.32%), Genital ulcer disease herpetic (HSV 2) in 12 (1.9%) Genital molluscum (molluscum contagiosum) in 10 (1.63%); disease of parasitic aetiology Genital Scabies in 7 (1.14%) and disease of fungal aetiology: Taenia in 9 (1.47%).

CONCLUSIONS: Our study shows, increasing incidence of new STI coinfections in PLVH, thereby decreasing their quality of life, noncompliance to treatment and increasing morbidity. Periodic counselling with assertion of safe sex and regular screening for STIs should be norm for early detection and starting appropriate treatment in these patients to improve their quality of life.

KEYWORDS: Coinfection, STI, PLHIV.

INTRODUCTION

In 2023, an estimated 630 000 people died from HIV-related causes and an estimated 1.3 million people acquired HIV. However, with access to effective HIV prevention, diagnosis, treatment and care, including for opportunistic infections, HIV infection has become a manageable chronic health condition, enabling people living with HIV to lead long and healthy lives. The virus mainly targets CD4+ T-lymphocyte helper cells, leading to extreme immune suppression with a continuous loss of cells. This suppression weakens the immune system and causes many clinical manifestations.[1] The error-prone activity of the viral reverse transcriptase (RT) is predicted to be the most influential mechanism for generating mutations.[2] Sexually transmitted co-infections increase HIV infectiousness through local inflammatory processes. The prevalence of STI among people living with HIV/AIDS has implications for containing the spread of HIV in general and the effectiveness of HIV treatments for prevention in particular.[3] The relationship between well-known STIs and HIV was described as "epidemiologic synergy" to emphasize how each might exacerbate the transmission or pathogenicity of the other. The synergy concept highlighted key populations that might be affected by both HIV and other STIs, including the challenges in treating STIs in persons with advanced HIV who might be profoundly immunosuppressed. According to this idea, STIs made people more susceptible to HIV and rendered people with HIV more infectious as well.[4] STIs can increase the risk of HIV transmission to or from other people, often due to sores or small tears in the skin that can cause exposure to the virus.[5] While HIV spread is driven by the prevalence of unrecognized and untreated HIV infections, co-factors and especially concomitant STIs enhance the efficiency of sexual HIV transmission, by increasing either the person's infectiousness or the partner's susceptibility.[4]

Aims and Objectives

- To estimate the prevalence of sexually transmitted infections in people living with HIV.
- To determine the various co-infections prevalent in the study group.
- To study the emerging trends in STI in patient with HIV.
- To analyse the risk behaviour in patients.

MATERIALS AND METHODS

Study Design

The study was prospective study.

Study Duration

Conducted for a period of 6 months from March 2024 to august 2024.

Study tools -Samples and Diagnostic Tests

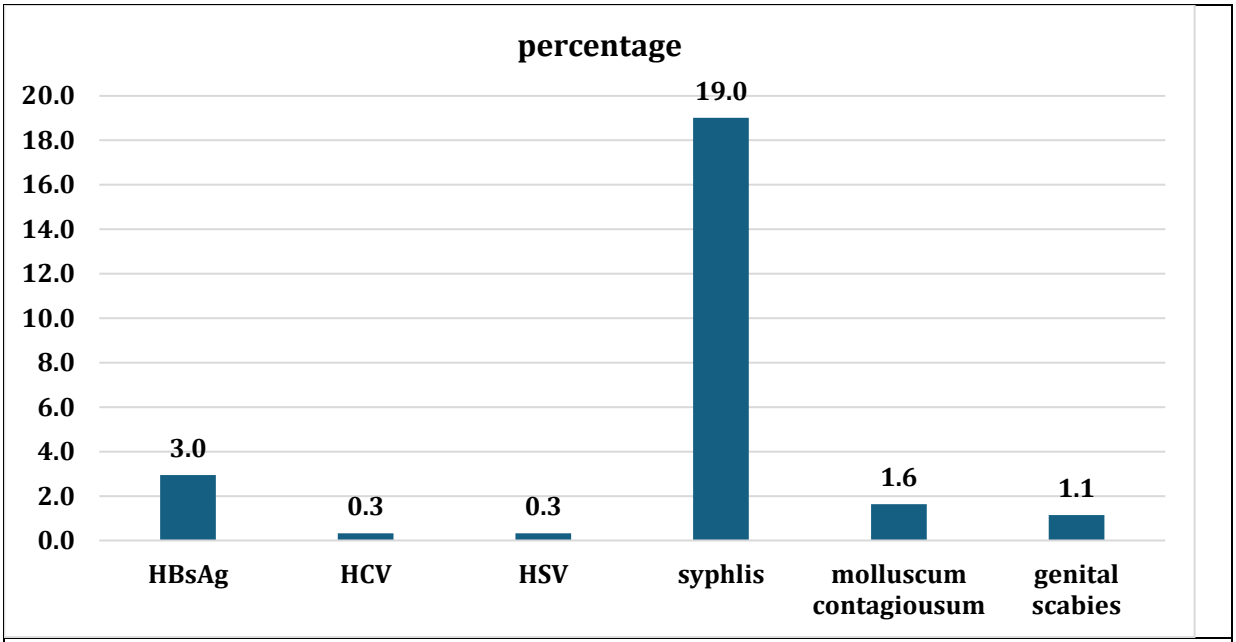
Blood samples were collected from consenting participants at each study visit. Enzyme-linked immunosorbent assay (ELISA) were run on plasma samples for hepatitis B surface antigen (HBsAg), HIV HCV and for herpes simplex (HSV)-2 antibodies. VDRL was performed for Treponema pallidum. (TPHA) was done to confirm diagnoses. For female participants, *Trichomonas vaginalis* In-Pouch culture was performed on vaginal secretions.

Inclusion Criteria

Six hundred ten high-risk HIV-positive individuals who were 18 years or older, residing in or near Hyderabad, and who were identified to be at increased risk for STI infection were recruited for this study between January 2024 and June 2024. Individuals were recruited from within patients seeking services at the STD clinic at Osmania General Hospital. All participants received treatment free of charge for any STIs diagnosed as part of this study. Participants completed a risk assessment questionnaire at enrolment, and provided blood samples for serologic testing at baseline, at 1 months, and at 6 months.

Exclusion Criteria
Patients not providing consent were excluded from the study.

RESULTS
Of the 610 PLHIV in the study, STI's were most common in 3rd decade of life, with male being the most common gender. syphilis Was the prominent STI in 116 people (19 %) followed by Mollusum contagiosum in 10 people (1.6%). History included Promiscuous behaviour & non use of condoms even after counselling. What was notable was that the partner in question was naive of the client's disease status; also, the patient was reluctant to get the partner for treatment / diagnosis. This leads to unabated spread of STIs including HIV; Which is a matter of concern.



Graph 1

DISCUSSION
Of the 610 patients' syphilis was fond to be most common. This in accordance with the study of Suresh Jaiswal et al[6] who reported prevalence of syphilis infection as 12.2% and according to Suresh Kumar Behara et al[7] who reported 10% cases infected with syphilis. It was followed by HbSAg (3%) and molluscum contagiousum (1.6 %)
Syphilis facilitates both HIV transmission & acquisition as Chancres cause epithelial and mucosal breaches, facilitating the transmission of HIV. Because immune suppression and dysregulation in HIV cases present atypically leading to missed clinical diagnosis. Therefore, serological testing is the primary tool for prudent diagnosis of various STIs in people with HIV. Early identification of which will enhance targeted therapy, partner intimation and treatment and thereby preventing further spread of HIV and other STIs.
Reason for prevalence of newer STIs in HIV patients was found to be promiscuous behaviour among people even after counselling, unsafe sex habits, multiple sexual partners and delay in assessing health services after probable events & failure to bring partner to treatment. Increased awareness about these diseases and availability of treatment at various centre through social media and peer influencers would empower people to assess proper treatment on time.

CONCLUSION
A detailed History taking showed Promiscuous behaviour among many patients & non-use of condoms even after counselling. What was notable was that the partner in question was naive of the client's disease status; also, the patient was reluctant to get the partner for treatment / diagnosis. This leads to unabated spread of STIs including HIV. High risk behaviour tends to be prevalent among few

patients even after counselling leading to spread of HIV to others and new STIs to themselves decreasing the quality of life. Periodic counselling with assertion of safe sex and regular screening for STIs should be norm for early detection and starting appropriate treatment in these patients to improve their quality of life.

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