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RETROSPECTIVE ANALYSIS OF CO-INFECTION PATTERNS IN GONORRHOEA PATIENTS AT AN APEX STD CENTRE IN INDIA

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Background

Gonorrhoea is a major global health issue, and India accounts for a significant fraction of the estimated 82 million cases worldwide. While there are several reports on co-infection between gonorrhoea and chlamydia, information on co-infection with other STIs is limited. Additionally, as a non-ulcerative STI, gonorrhoea may increase the risk of both transmitting and acquiring human immunodeficiency virus (HIV). Therefore, it is crucial to understand the co-infection patterns of gonorrhoea with other STIs for effective prevention and treatment strategies.

Aim/Methods

AIMS To investigate the prevalence of co-infections in gonorrhoea-positive patients and compare it with those who were negative for the disease. **METHODS** A retrospective analysis was conducted on data collected from 43 patients diagnosed with gonorrhoea who visited the STD clinic at Safdarjung Hospital in Delhi in 2022. These patients underwent testing for urethral, anal, and/or oral swabs, as well as urine samples, based on their sexual history and high-risk behaviour, after obtaining their consent. Multiplex PCR was used to screen for multiple infections. In order to analyse the co-infection profile, an equal number of gonorrhoea-negative swabs were taken from patients who visited the OPD with symptoms of urethral discharge.

Results

The majority of patients in the study were between 20 and 40 years old (84.3%) and unmarried (51.5%). The male to female ratio was 5.4 to 1. The study found that the most common coinfections among gonorrhoea patients were *Mycoplasma hominis* and *Ureaplasma urealyticum*, which were positive in 8 patients each. Additionally, 7 patients had high-risk HPV coinfection, while 4 had low-risk HPV coinfection. TPHA was positive in 5 patients, and 3 were HIV-ELISA positive. Other coinfections observed in the study included 2 cases of *Chlamydia trachomatis*, 2 of *Ureaplasma parvum*, and 1 of *Mycoplasma genitalium*. The study found statistically significant coinfection of gonorrhoea patients with *Mycoplasma hominis* ($p=0.0183$), low-risk HPV ($p=0.0155$), and high-risk HPV ($p=0.0009$).

Conclusions

This retrospective analysis sheds light on the co-infection profile of gonorrhoea patients in India and highlights the need for comprehensive screening and management of STIs. The findings emphasize the importance of a multi-pronged approach to control the spread of STIs, including gonorrhoea, in the country.

