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Clinico-behavioral study of gonococcal urethritis in patients attending sexually transmitted infections clinic in India

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### Background

Urethral discharge (UD) syndrome is a common sexually transmitted infection in India. Based on etiology UD is classified into gonococcal (GCU) and non-gonococcal urethritis (NGU). We performed a clinico-behavioral cross-sectional study on patients presenting with urethral discharge syndrome at the Apex Regional STD center, Safdarjung Hospital, New Delhi, India.

### Aim/Methods

Study was conducted at Apex Regional STD Center, Safdarjung Hospital, India from 2020-2022, wherein consecutive patients with a clinical diagnosis of UD syndrome were registered. Gram staining and wet mount were used for detection of Gram negative diplococci and motile organisms. Urethral swab and urine voided at least after 4 hours of retention were collected for qualitative real time PCR for detection of *N.gonorrhoeae*(NG), *Chlamydia trachomatis*(CT), *Ureaplasma urealyticum*(UU), *Ureaplasma parvum*(UP), *Mycoplasma genitalium*(MG), *Mycoplasma hominis*(MH), *Trichomonas vaginalis*(TV) and Herpes simplex viruses(HSV) type 1 and 2. Clinical, behavioral and etiological profile of patients with GCU was analyzed.

### Results

Of 100 male patients, 43% were diagnosed with GCU by urethral swab real-time PCR. The mean age of presentation of GCU was  $27.98 \pm 8.02$  years and the majority of the study subjects (39.53%) belonged to the younger age group of 21-25 years. 31 out of 43 patients were heterosexual followed by 9 homosexuals, 3 bisexuals. History of paid sex worker was present in 41.86% and 62.79% patients had multiple sexual

partners. Proportion of patients with number of days since last sexual intercourse as  $\leq 7$  days was significantly higher in GCU. Yellowish white, profuse discharge of  $\leq 7$  days was significantly associated with GCU. Co-infections of GCU with other organisms was seen in 58.14%.

### Conclusions

In our study most common organism detected was NG in 43 (43%) patients followed by UU in 25 (25%) patients. GCU is still the most common cause of urethritis in developing countries and patients with short history of profuse, purulent discharge should raise the suspicion of GCU and should be followed with appropriate laboratory tests as Gram's stain, culture and or PCR. Treatment and followup of both patient and partner is necessary.