



Mycoplasma genitalium: A descriptive study of 196 cases

Sir,

Mycoplasma genitalium is an emerging sexually transmitted infection and the second most common cause of non-gonococcal urethritis, after *Chlamydia trachomatis*.^{1,2} It is also a potential risk-factor for cervicitis, obstetric complications and a cofactor for HIV transmission. The high prevalence of asymptomatic *Mycoplasma genitalium* infections and its ability to develop antimicrobial resistance have led to public health concerns.^{1,2}

The latest guidelines recommend testing for *Mycoplasma genitalium* infection in patients with non-gonococcal urethritis or with features suggestive of pelvic inflammatory disease. Although routine screening based on risk factors is currently not recommended, it may be performed in some high-risk patients.³

We aimed to describe the demographic characteristics and clinical features of patients diagnosed with *Mycoplasma genitalium* to guide future selective screening strategies for this infection.

This is a retrospective, observational, single-center study including patients diagnosed with *Mycoplasma genitalium* by Multiplex Real-time Polymerase Chain Reaction Allplex© STI Essential Assay Q (Seegene) between September 2018 and December 2019, in a tertiary hospital in Barcelona. Clinico-demographic characteristics such as age, gender, nationality, sexual orientation, drug use, sexual risk behaviours, site of infection, presence of symptoms, coinfection with other sexually transmitted infection, HIV-related information and treatment undertaken were recorded for every patient.

Patients with previously detected *Mycoplasma genitalium* in the same location within last 3 months were excluded, attributing such cases to persistent infection.

Among the 196 patients included for analysis, 187 (95.4%) were male with a mean age of 36.6 ± 8.3 years, 106 (54.1%) were non-Spanish and 166 (84.7%) were men who had sex with men. Most patients [157 (80.1%)] reported a sexually transmitted infection and 94 (48%) disclosed chemsex use [Table 1].

Clinical features and therapeutic management are presented in Table 2. Urethra was the commonest location in both homosexual [77 (46.4%)] and heterosexual [10 (83.3%)] men. Most infections were asymptomatic [119 (60.7%)], while (53, 56.4%) of the urethral infections were symptomatic. Among the

heterosexual individuals, 11 (55%) presented with symptoms, compared to 54 (33.1%) men who had sex with men.

Regarding coinfection, 27 (13.8%) patients presented at least one other concomitant sexually transmitted infection in the same location where *Mycoplasma genitalium* was identified. Urethra was the commonest site of coinfection, accounting for 18 (44%) cases. Patients with coinfection reported symptoms in 18 (66.9%) cases, versus 55 (33.3%) of the non-coinfected. *Neisseria gonorrhoeae* was the most frequent co-infecting agent in 29 (58%) patients, followed by *Chlamydia trachomatis* [14 (28%)]. Overall, 143 (73%) patients had concomitant HIV infection. Most patients received treatment 149 (76%), commonest being azithromycin in a 5-day regimen in 58 (29.6%) cases [Table 2].

Urethral samples demonstrated maximum yield of *Mycoplasma genitalium* in 95 (48.5%) cases, possibly attributable to the

Table 1: Demographic characteristics of patients with *Mycoplasma genitalium* infection

Characteristic	Frequency, no (%) (n = 196)	
Age, mean (SD) [range], y	36.6 (8.3) [19–63]	
Gender		
Male	187	(95.4)
Female	7	(3.6)
Transgender female	2	(1.0)
Nationality		
Spanish	90	(45.9)
Other (non-Spanish)	106	(54.1)
Sexual orientation		
MSM	166	(84.7)
Heterosexual	19	(9.7)
MSW	12	(6.1)
Women	7	(3.6)
TSM	2	(1.0)
Not available	9	(4.6)
History of previous STI		
Yes	157	(80.1)
No	13	(6.6)
Not available	26	(13.3)
Chemsex user		
Yes	94	(48)
No	46	(23.5)
Not available	56	(28.5)

MSM: Men who have sex with men, MSW: Men who have sex with women, TSM: Transgender female who have sex with men, STI: Sexually transmitted infection

How to cite this article: Alamon-Reig F, Riera-Monroig J, González-Cordón A, Bosch J, Alsina M, Fuertes I. *Mycoplasma genitalium*: A descriptive study of 196 cases. Indian J Dermatol, Venereol Leprol 2022;88:873.

Received: March, 2021 Accepted: March, 2022 EPub Ahead of Print: July, 2022 Published: November, 2022

DOI: 10.25259/IJDVL_217_2021 PMID: 35962503

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Table 2: Clinical features and therapeutic management in patients with *Mycoplasma genitalium* infection

Characteristics	Frequency, no (%) (n = 196)	
Location		
Urethra	95	(48.5)
Rectum	73	(37.2)
Pharynx	21	(10.7)
Cervix	7	(3.6)
Symptoms		
Present	73	(37.3)
Absent	119	(60.7)
Not available	4	(2.0)
Coinfection (syphilis)		
Present	25	(12.8)
Absent	152	(77.6)
Not available	19	(9.6)
Coinfection (Other STI)		
Same location as MG	27	(13.8)
Location		
Urethra	18	(44.0)
Rectum	13	(26.0)
Pharynx	15	(30.0)
Coinfecting microorganism		
<i>C. trachomatis</i>	14	(28.0)
<i>N. gonorrhoeae</i>	29	(58.0)
Other	7	(14.0)
HIV Infection		
Present	143	(73.0)
Absent	52	(26.5)
Not available	1	(0.5)
HIV viral load		
Detectable (>50 cp/mL)	21	(14.7)
Undetectable (<50 cp/mL)	122	(85.3)
Treatment		
Yes	149	(76.0)
Azithromycin (5-day regimen)		
Azithromycin (1g single-dose)	58	(29.6)
Moxifloxacin	23	(11.7)
Moxifloxacin	10	(5.1)
Ceftriaxone + Azithromycin (1g single-dose)	32	(16.3)
Doxycycline	7	(3.6)
Other	19	(9.7)
No	39	(20.0)
Not available	8	(4.0)

STI: Sexually transmitted infection, MG: *Mycoplasma genitalium*, *C. trachomatis*: *Chlamydia trachomatis*, *N. gonorrhoeae*: *Neisseria gonorrhoeae*, HIV: Human immunodeficiency virus, CD4: CD4+ T cells

previously described higher rates of symptomatic infection in this location. However, rectal or pharyngeal infections maybe underestimated.⁴ Remarkably, men who had sex with men demonstrated more *Mycoplasma genitalium* infections in the rectum [73 (41.0%)] and pharynx [21 (12.7%)], which may explain the higher rates of asymptomatic infection in this group 108 (66.7%). Current guidelines do not recommend treatment of asymptomatic infection in these two sites.

Coinfection with *Neisseria gonorrhoeae* or *Chlamydia trachomatis* in the same location was noted in 13.8% (n = 27) of all individuals, which is similar to that found by Read *et al.* in a series of men who had sex with men (17%).⁵ *Neisseria gonorrhoeae*, which is the commonest bacterial sexually

transmitted infection in our region, accounted for (58%, 29) of coinfections. Our data suggest that coinfection influences patient symptoms.

Some of our patients were being periodically tested in a high-risk sexually transmitted infection follow-up program, which could have led to overestimated rates of co-infection with HIV or other sexually transmitted infections along with the use of chemsex in our sample. Chemsex is a growing high-risk sexual practice involving intentional sex under the influence of recreational drugs, mostly among homosexual men, practised by almost half of the population studied. Macrolide resistance could not be assessed in our population, which should be evaluated in further studies to better determine the utility of macrolides in such patients.

Most patients in this study were people living with HIV and men having sex with men. More than half of the infections were asymptomatic. Urethral location and coinfection, particularly with *Neisseria gonorrhoeae*, influenced clinical presentation. The heterosexual group presented with symptoms more frequently than men having sex with men. Further evidence is required to design screening programs and to assess variables that are associated with symptomatic *Mycoplasma genitalium* infections.

Declaration of patient consent

Patient's consent is not required as patient's identity is not disclosed or compromised.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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