

1866. *Mycoplasma genitalium* in asymptomatic people with sexual risk behaviours; screen or not to screen, that's the question

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INTRODUCTION AND PURPOSE

Mycoplasma genitalium (MG) is an emerging sexually transmitted agent which causes urethritis, cervicitis and probably many other genital syndromes. Furthermore, MG macrolide and fluoroquinolone resistance is a major problem worldwide. A previous study conducted in Barcelona reported an overall macrolide resistance rate of 35%, mainly in men who have sex with men (MSM). However, there is little data about the prevalence of MG infection among asymptomatic people.

The aim of this study is to estimate the prevalence of MG and macrolide resistance among asymptomatic people with sexual risk behaviours.

METHODS

The study was conducted prospectively, between October 2017 and January 2018, among asymptomatic users attending at Drassanes Exprés (Vall d'Hebron, Barcelona). Drassanes Exprés Programme is a *point of care* service for STI screening (*Chlamydia trachomatis*, *Neisseria gonorrhoeae*, HIV and Syphilis) of asymptomatic people with sexual risk behaviours.

In this study; urine, vaginal and rectal swabs of recruited users were tested for MG and macrolide genotypic resistance markers (A2058G, A2058T, A2058C, A2059G, A2059C; *E. coli* numbering) using ResistancePlus^R MG (Speedx®).

RESULTS

During the study period, a total of 1404 specimens from 890 patients were tested for MG and macrolide resistance. Characteristics of users recruited are shown in table 1, stratified by gender/sexual behaviour.

Table 1. Users data collected by sexual behaviour

Characteristics	Men sex men (MSM) (n = 489) No. (%)	Men sex women (MSW) (n = 179) No. (%)	Women (n = 222) No. (%)
Age (range)	35.6 (17.5-74.8)	32.4 (18.0-64.6)	31.0 (18.5-65.7)
Origin			
- Spanish	311 (63.6)	99 (55.3)	117 (52.7)
- Other (living in Spain)	33 (6.7)	26 (14.5)	23 (10.4)
- European	34 (7.0)	24 (13.4)	27 (12.2)
- Other	111 (22.7)	30 (16.8)	53 (23.9)
Sexual partners (last 3 months)			
- 1-5	299 (61.1)	153 (85.5)	184 (82.9)
- 5-20	162 (33.1)	24 (13.4)	27 (12.2)
- >20	26 (5.3)	2 (1.1)	11 (5.0)
HIV positive	84 (17.2)	0	0
Syphilis history	177 (36.2)	1 (0.6)	1 (0.5)
Specimens			
- Rectal swab	471 (96.3)	-	58 (26.1)
- Vaginal swab	-	-	222 (100.0)
- First void urine	489 (100.0)	179 (100.0)	-

Prevalence data of MG and macrolide resistance are shown in the following tables

Table 2. *M. genitalium* detection by sexual behaviour

Patients; stratified by sexual conduct	Positive MG N. (%)	Resistant MG N. (%)	Negative N. (%)	Total
Women	10 (4.5)	1 (10.0)	212 (95.5)	222
MSW	10 (5.6)	1 (10.0)	169 (94.4)	179
MSM	46 (9.4)	32 (69.6)	443 (90.6)	489
Total	66 (7.4)	34 (51.5)	824 (92.6)	890

Table 3. *M. genitalium* detection by sexual behaviour and specimen

Sexual behavior / Specimens	Positive MG N. (%)	Resistant MG N. (%)	Negative N. (%)	Inhibited N. (%)	Total
Women (n = 222)					
- Vaginal swab	7 (3.2)	1 (14.3)	208 (93.7)	7 (3.2)	222
- Rectal swab	4 (6.9)	0	47 (81.0)	7 (12.1)	58
MSW (n = 179)					
- First void urine	10 (5.6)	1 (10.0)	169 (94.4)	0	179
MSM (n = 489)					
- First void urine	9 (1.9)	8 (88.9)	473 (97.7)	2 (0.4)	484
- Rectal swab	40 (8.7)	27 (67.5)	384 (83.3)	37 (8.0)	461
Total	70 (5.0)	37 (52.9)	1281 (91.2)	53 (3.8)	1404

Overall, MG prevalence was 7,4%; of the identified MG infections, macrolide resistance was notably prevalent among men who had sex with men (MSM) compared to either heterosexual men or women.

Regarding specimens, MG infection was very prevalent in rectum in both MSM patients (8,7%) and women (6,9%).

CONCLUSIONS

- This study shows high prevalence of MG infection and macrolide resistance among asymptomatic people with sexual risk behaviours.
- The data also highlights the possible need for MG screening and treatment in high risk subpopulations as a possible reservoir for silent MG infection and transmission.
- New molecular technologies; such as the ResistancePlus^R MG kit (Speedx®); could provide a rapid response for this screening approach with the advantage of treatment guidance, one of the main challenges in MG management.

*Conflict of interests: Speedx Pty Ltd supplied all the reagents for molecular testing

