

RATES OF CO-INFECTION

WITH CHLAMYDIA, GONORRHEA, TRICHOMONAS, AND MYCOPLASMA
GENITALIUM IN CLIENTS SEEKING STI SERVICES, OAKLAND COUNTY, MI

INSTITUTION: Oakland County Health Division, Pontiac, MI, USA

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BACKGROUND

- Mycoplasma genitalium (MG) was identified as an emerging pathogen by CDC in 2015.
- In February 2016, Oakland County Health Division (OCHD) ran a pilot study of 500 patients.
- 11.6% of patients in the study were positive for MG.
- MG is routinely tested for in Europe and Australia.
- Little is known about rates of infection in the United States.
- All patients presenting to OCHD clinics are tested for MG.

METHODS

From August 1, 2016 to October 11, 2018, a Nucleic Acid Amplified Test (NAAT) for MG was added to standard STI testing for 20,745 patients presenting to OCHD clinics. Testing was performed using Aptima Combo 2 (CT/NG) IVD kits, Aptima TV IVD, and analyte specific reagents for MG on the Hologic Panther analyzer.

RESULTS

- 12.9% of samples tested were positive for MG. Of the 20,745 samples tested, 9.3% were positive for chlamydia, 5.0% were positive for gonorrhea, and 3.8% were positive for trichomonas.
- In males, there was not a notable difference in the rate of MG infections in men who have sex with women (MSW) men who have sex with men (MSM) or men who have sex with men and women (MSMW).

**Organism prevalence of *Mycoplasma genitalium*,
Chlamydia trachomatis, *Neisseria gonorrhoeae*, and *Trichomonas vaginalis* by Race**

Disease	Race	Prevalence	P-Value
<i>M. genitalium</i>	African-American	2057 (14.9%)	<0.001
	Caucasian	475 (8.9%)	
<i>C. trachomatis</i>	African-American	1350 (9.8%)	0.003
	Caucasian	438 (8.2%)	
<i>N. gonorrhoeae</i>	African-American	713 (5.1%)	0.09
	Caucasian	262 (4.9%)	
<i>T. vaginalis</i>	African-American	658 (4.8%)	<0.001
	Caucasian	99 (1.9%)	

***Mycoplasma genitalium* Co-infection Prevalence with
Chlamydia trachomatis, *Neisseria gonorrhoeae*, and *Trichomonas vaginalis* by Gender**

<i>M. genitalium</i>	<i>C. trachomatis</i>	<i>N. gonorrhoeae</i>	<i>T. vaginalis</i>	NO. (%) OF SPECIMENS WITH INDICATED STI PROFILE		
				Males	Females	Total
+	-	-	-	1153 (56.3)	896 (43.7)	2049 (39.7)
-	+	-	-	830 (64.9)	448 (35.1)	1278 (24.8)
-	-	+	-	470 (79.0)	125 (21.0)	595 (11.5)
-	-	-	+	273 (45.4)	328 (54.6)	601 (11.6)
+	+	-	-	210 (65.4)	111 (34.6)	321 (6.2)
+	-	+	-	109 (80.1)	27 (19.9)	136 (2.6)
+	-	-	+	37 (38.9)	58 (61.1)	95 (1.8)
+	+	+	-	48 (76.2)	15 (23.8)	63 (1.2)
+	+	-	+	5 (35.7)	9 (64.3)	14 (0.3)
+	-	+	+	3 (60.0)	2 (40.0)	5 (0.1)
+	+	+	+	1 (33.3)	2 (66.7)	3 (0.1)

CONCLUSIONS

- Adding MG to the standard STI test panel should be considered.
- Routine testing should be considered in high risk populations to monitor incidence and ensure effective treatment.
- MG had a higher incidence than chlamydia, gonorrhea, and trichomonas providing evidence that MG is an STI.
- Our data indicated a significant number of patients were positive for MG only (irrespective of gender), which highlights the importance of testing, as the most effective treatment for MG is not the same as other STIs.