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Prevalence of Mycoplasma genitalium and Macrolide Resistance in Adolescent Females Receiving Care at a Pediatric Hospital

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Introduction

- *Mycoplasma genitalium* is a sexually transmitted organism. Its pathogenic role is not well defined with knowledge gaps related to its prevalence and macrolide resistance rates in adolescent females.

Objective

- To determine the prevalence of *M. genitalium* and detected macrolide resistance among adolescent females seeking care at a pediatric children's hospital.

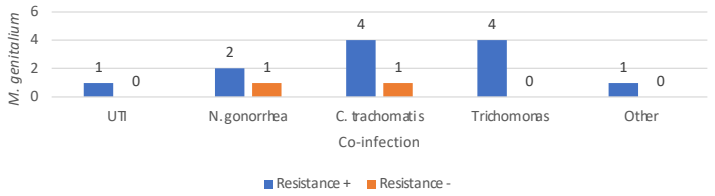
Methods

- We collected 200 discarded urogenital samples (56 urine and 144 vaginal) from adolescent females aged 12-17 years presenting to the emergency departments, pediatric/adolescent clinics, and urgent care sites at Children's Mercy Hospital and Clinics.
- We excluded samples that were taken for concerns of abuse or wards of state.
- M. *genitalium* detection: Aptima *Mycoplama genitalium* assay (Hologic)
- Macrolide resistance : Lightmix Modular Mycoplasma Macrolide kit (TIB MOLBIOL)
- Results confirmed by Sanger Sequencing.
- We reviewed electronic medical records to determine presenting symptoms, concurrent urinary tract or sexually transmitted infections, socio-demographics, and sexual behaviors.

Results

- Prevalence *of M. genitalium* was 9.5% (95% CI, 5.4, 13.6); Total N=19. Mean age 17 years.
- Macrolide resistance was identified in 89.5% of detected organisms (95% CI, 75.7, 100).
- 1 or more co-infecting organisms (N=9) was common among females with *M. genitalium*. (Figure 1)
- Macrolide resistance was found in 3 of the 4 females treated with Azithromycin.
- *M. genitalium* was more common in black females than whites [OR 6.23 (95% CI, 1.37-28.36)].

Mycoplasma genitalium and co-infecting organisms



Conclusion

- *M. genitalium* was detected relatively frequently among genitourinary samples salvaged from adolescent females attending a children's hospital and was nearly always resistant to macrolide antibiotics. Additional work is needed to clarify the potential pathogenic role of *M. genitalium* in adolescent female reproductive health.