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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 Mycoplana 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)].

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.

Mycoplasma genitalium and co-infecting organisms

![Graph showing Mycoplasma genitalium and co-infecting organisms with resistance status]