

ORIGINAL ARTICLE

Prevalence and Antimicrobial Resistance of *Ureaplasma urealyticum* and *Mycoplasma hominis* in Patients with Genital Tract Infection in Jiangsu, China

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SUMMARY

Background: The aim of this study was to investigate the infection and antimicrobial resistance of *Ureaplasma urealyticum* (*U. urealyticum*) and *Mycoplasma hominis* (*M. hominis*) in patients with genital tract diseases in Jiangsu, China.

Methods: A total of 3,321 patients suspected with genital tract infectious diseases were enrolled in this study from September 2017 to September 2020. The *Mycoplasma* detection and antimicrobial susceptibility were tested using the commercially available *Mycoplasma* kit.

Results: Among the 3,321 specimens tested, 1,503 (45.3%) were positive for Mycoplasmas, and the proportion of mono-infection of *U. urealyticum* is highest (79.5%). The overall infection rate has been increasing in the past 3 years. The positive rate in females (68.7%) was higher than in males (25.0%), and the main infection age group was 20 - 39 (81.2%). Besides, *U. urealyticum* and *M. hominis* displayed relative lower resistance rates to gatifloxacin, josamycin, minocycline, and doxycycline (6.0%, 6.5%, 3.1%, and 3.2%, respectively). However, the antimicrobial resistance rates to azithromycin, clindamycin, roxithromycin, sparfloxacin, and ofloxacin were relatively high (45.4%, 42.1%, 34.9, 36.0, and 65.5%, respectively). Antimicrobial resistance of *U. urealyticum* and *M. hominis* to these 14 drugs have been changing in the past 3 years.

Conclusions: In total, these preliminary data showed the prevalence and antimicrobial resistance status of *U. urealyticum* and *M. hominis* in patients suspected with genital tract infectious diseases, which has use for reference on both prevention and treatment of diseases caused by them.

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Supplementary Tables and Figures

Table S1. Trend of the positive rates of Mycoplasmas of males and females respectively in endocervical or urethral specimens each year.

Year	2017 - 2018	2018 - 2019	2019 - 2020
Positive cases (males)	76	185	185
Sample size (males)	418	704	661
Positive rates (males) (%)	<u>18.2</u>	<u>26.3</u>	<u>28.0</u>
Positive cases (females)	231	360	466
Sample size (females)	330	517	691
Positive rates (females) (%)	<u>70</u>	<u>69.6</u>	<u>67.4</u>