

P1694 *Mycoplasma genitalium* genital infection and frequency of resistance to macrolides and fluoroquinolones in Navarra, Spain

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Background: *Mycoplasma genitalium* is a significant cause of non-gonococcal urethritis (NGU) in men. In women, it has been associated with both cervicitis and pelvic inflammatory disease. An increasing incidence of treatment failure suggests the emergence of antibiotic resistance associated to mutations in the 23S rRNA gene (Azithromycin, the election treatment) and in *parC* and *gyrA* genes (Moxifloxacin, alternative treatment).

Materials/methods: The study was conducted retrospectively/prospectively with specimens submitted between August 2015 and October 2018 to the Microbiology Department, where *M. genitalium* was detected using PCR-TR (Allplex™ STI Essential Assay, Seegene, Korea). Susceptibility to macrolides and fluoroquinolones was tested by sequencing the 23S rRNA, *parC* and *gyrA* genes.

Results: The 173 patients had a median age of 29.4 years (14-56) and 101 (58.4%) were men. The specimens with a positive result were: 74 (38.7%) vaginal/endocervical swabs, 65 (34.1%) urethral swabs, 47 (24.6%) urine samples (40 from men and 7 from women) and 5 (2.6%) rectal swabs (from 5 men).

23S rRNA gene was amplified in 124 (71.7%) patients. Macrolide resistant strains were detected in 27 (21.8%) patients. 16 (59.3%) harboured a single nucleotide polymorphism (SNP) at position A2059G (*Escherichia coli* numbering) and 11 (40.9%) at A2058G in region V of 23S rRNA gene. 22/124 (17.7%) patients were infected primarily by an azithromycin-resistant strain and 5/46 (10.9%) developed azithromycin-resistance during treatment.

We identified point mutations in the quinolone resistance determining region (QRDR) of the topoisomerase IV gene *parC* and mutations in the DNA girase gene *gyrA* or both in 33/128 (25.8%) patients.

Conclusions:

- Global macrolide resistance in Navarra was 17.7%. The frequency of developing resistance during azithromycin treatment was 10.9%.
- Potential fluoroquinolone resistance was detected in 25.8% specimens.
- It is necessary to implement combined diagnostic-resistance detection assay for *M. genitalium* to promote antibiotic stewardship, to limit the spread of resistances and to reduce patient morbidity.



