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ANTIMICROBICI

**MACROLIDE-RESISTANT MYCOPLASMA GENITALIUM IN A SELECTED COHORT IN NORTH-EAST OF ITALY**

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**INTRODUZIONE**

Mycoplasma genitalium (MG) is one of the most common bacterial pathogens of sexually transmitted infections (STIs). It is cause of non gonococcal urethritis in man with a prevalence of 31%. M. genitalium has also been associated with pelvic inflammatory disease, endometritis and cevicitis in woman with a prevalence of 10-30%. The infections are often asymptomatic.

Because of its slow growth, nucleic acid amplification tests are the preferred methods for its detection and for antimicrobial susceptibility testing.

The 2016 European guideline on M. genitalium infections recommends treatment with Azithromycin or Josamycin in uncomplicated infections. Different studies have shown a rapidly increasing prevalence of macrolide resistance that has become a problem in multiple countries, so Moxifloxacin is recommended as second line treatment for resistant-MG infection.

In the present study, we aimed to estimate the prevalence of MG infections as well as the prevalence of mutations linked to macrolide resistance.

**METODI**

From February to July 2019, we retrospectively evaluated the prevalence of M. genitalium infections in 323 patients from STIs-AIDS Unit. Urine and genital swabs were tested for MG infection using Allplex™ MG & AziR Assay (Seegene). Test simultaneously detects MG and six 23S rRNA mutations associated with macrolide resistance: A2058C, A2058G, A2058T, A2059C, A2059G, A2059T.

**RISULTATI**

Overall, the prevalence of MG was 9.0% (29/323). Of 29 MG-positive patients, 23 were male (79.3%), 6 women (20.7%), with median age of 35 years old, 28 (96.6%) patients presented no symptoms, only one complained about pains during sexual intercourse.

23S rRNA mutations were reported in 44.8% (13/29) of strains: A2059G substitution accounted for 53.9% (7/13), A2058C for 30.8% (4/13) and A2058G for 15.4% (2/13). About of 13 resistant-MG patients, 5 had been treated with Azithromycin for STIs before.

**CONCLUSIONI**

To date, there is no study about prevalence of macrolide-resistant MG in Italy. We report a high presence of M. genitalium, also of resistant strains in this high-risk asymptomatic population. Our selected patients may be particularly vulnerable to acquiring and transmitted M. genitalium due to their higher risk of STIs and related macrolide therapy. This could select the resistance then spread through sexual intercourse. For this reason, all patients have been treated, even if asymptomatic.

Therefore, our findings support the routine use of an assay to detect macrolide resistance mutations in M. genitalium positive samples, as recommended in the European guideline. This will ensure a correct empirical treatment, and the control of antimicrobial resistance progression to promote antimicrobial stewardship.