



Abstract 7904

***Mycoplasma genitalium*: evaluation of macrolide resistance in a very large setting of sexually-transmitted infections**

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Background: *Mycoplasma genitalium* (MG) is a slowly growing microorganism causing inflammation of the urogenital tract. Azithromycin is the most used antibiotic, nevertheless a recently increased number of treatment failure was observed. Macrolide resistance is associated to single nucleotide mutation on gene 23S rRNA. The aim of this project was a retrospective evaluation of macrolide resistance on positive samples for *M. genitalium* on our population.

Materials/methods: From 15th March 2018 to 15th November 2019, samples positive for MG were assessed with Anyplex II STI™ (Seegene). Results were confirmed with STI PLUS ELITe MGB® kit and with Macrolide-R/MG ELITe MGB® kit (detection of A2058C, A2058G, A2058T, A2059G, A2059C mutations) on ELITe InGenius platform (ELITeTechGroup S.p.A.).

Results: 4100 samples were analysed for sexual transmitted infections: 2940 were negative, whereas 1160 were positive for at least one pathogen. The most commonly isolated microorganisms was *U. parvum* in 17.1% (701) samples, followed by *U. urealyticum* 7.98% (327), *M. hominis* 4.9% (201), *C. trachomatis* 1.9% (78), *N. gonorrhoeae* 1.05% (43), *M. genitalium* 0.95% (39), and *T. vaginalis* 0.93% (38). The 39 positive samples for MG were urine 56.4% (22), anal swab 20.5% (8), urethral swab 7.7% (3), cervical swab 10.3% (4), vaginal swab 2.6% (1) and one fetal placenta 2.6%, belonging to 34 patients: 70.6% (24) were males, 23.5% (8) were females and 5.9% (2) were transgender. Among them, 55.9% (19) declared at risk sexual intercourses; 35.3% (12) were symptomatic, 5.9% (2) were controlled for sterility problems and 2.9% (1) had a corioamnionitis. Regarding the sensitivity to macrolide, 52.9% of strains (18) were sensitive, while 47.1% (16) were resistant. Among the latter, 43.7% (7) belonged to symptomatic patients; 56.3% (9) had at risk sexual intercourses.

Conclusions: *M. genitalium* shows a low prevalence (0.95%), among patients tested for sexually transmitted infections, but remarkably high level of macrolide resistance (47.1%). Since azithromycin is the first choice of empirical treatment in Italy also for *C. trachomatis*, the spreading of MG strains resistant to macrolides may further increase in the following years. Hence, multicenter studies aimed at the national evaluation of resistance of MG to macrolides is warranted.

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