## Prevalence of Mycoplasma hominis and Ureaplasma urealyticum as Causative Agents of Non-Gonococcal Urethritis in Men and Determination of Anti-Bacterial Resistance Rates

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**Abstract**: Objective: The aim of this study was to determine the prevalence of Mycoplasma hominis and Ureaplasma urealyticum as the causative agents in men with non-gonococcal urethtritis, and anti-bacterial resistance rates. Methods: The Study was carried out in the two Medical Microbiology Laboratories belonging to: Konya Education and Research Hospital and ANS Practice and Research Hospital, Afyon Kocatepe University, between January 2012 and December 2015. Urethral samples were obtained from patients by using a swab. Mycoplasma hominis and Ureaplasma urealyticum were detected by using Mycoplasma IST-2 kit (bio-Mérieux, Marcy l'Étoile, France). Neisseria gonorrhoea was excluded by Gram staining and culture methods. Results: Of all the one hundred and eighty-eight male patients with urethritis, forty M. hominis and forty two U. urealyticum were detected. Resistance rates of M. hominis strains against to doxycycline, ofloxacin, erythromycin, tetracycline, ciprofloxacin, azithromycin, clarithromycin, and pristinamycin were found as 5 %, 65 %, 25 %, 5 %, 80 %, 20 %, 20 %, 20 %, 5 %, respectively. Resistance rates of U. urealyticum strains against to doxycycline, ofloxacin, erythromycin, tetracycline, ciprofloxacin, azithromycin, clarithromycin, and pristinamycin were found as 4.7 %, 66.6 %, 23.8 %, 4.75 %, 81 %, 19 %, 4.7 % respectively. No resistance was detected against to josamycin, for both the strains. Conclusions: It was concluded that; ciprofloxacin and ofloxacin had the weakest; josamycin, doxycycline, and tetracycline had the strongest in vitro anti-bacterial activity, for treatment of the NGU. So josamycin, doxycycline, and tetracycline should be preferred as the first choice of anti-bacterial agents, for treatment of the patients with non-gonococcal male urethritis.

Keywords: antimicrobial resistance, Mycoplasma hominis, non-gonococcal urethritis, Ureaplasma urealyticum

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