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Bacterial pathogens isolated from urine cultures and antibiotic susceptibility rates: Two years retrospective study

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Urinary tract infections (UTIs) are common bacterial infections affecting millions of people. In this study, urine cultures (UC) evaluated in our medical microbiology laboratory between January 2013 and December 2014 has been included. Totally 8068 UC were positive. For identification and antimicrobial susceptibility testing; conventional methods, automated microbiological systems and Kirby-Bauer disc diffusion test were applied according to Clinical and Laboratory Standards Institute (CLSI) criteria. *Escherichia coli* was the leading pathogen (n=3951) (48.97%), *Enterococcus* spp. (n=1066), *Klebsiella* spp. (n=921), Group B *Streptococci* (n=509) and coagulase negative Staphylococci (CNS) (n=582) were other commonly isolated bacterial strains, respectively. The resistance rates of *Enterobacteriaceae* (%) to Ampicillin, Ampicillin & Sulbactam, Amoxicillin & Clavunate, Pipperacillin & Tazobactam; Gentamicin, Amikacin, Trimethoprim & Sulfamethoxazole, Ciprofloxacin, Cefazolin, Cefotaxime, Ceftriaxone, Cefepime, Cefoxitin, Ceftazidime, Imipenem, Meropenem, Aztreonam and Nitrofurantoin were 39.1, 38.2, 17.2, 11.6, 16.5, 1.7, 37.9, 28.7, 53.5, 19.8, 21.2, 15.1, 8.2, 16.5, 0.9, 0.9, 22.1 and 9.2, respectively. For *Enterococcus* spp.; penicillin, ampicillin, ciprofloxacin, linezolid, gentamicin, vancomycin, teicoplanin and nitrofurantoin resistance rates (%) were 30.2, 17.1, 24.1, 0.5, 25.7, 1.4, 1.4 and 6.6, respectively. Carbapenem resistance rates for *Enterobacteriaceae* were 0.9%, *Acinetobacter* spp. was 71.4% and *Pseudomonas* spp. was 14.7%. 94 (1.17%) *S. aureus* strains isolated and 11 (11.7%) of these isolates, 43.6% of the CNS were methicillin resistant. Antimicrobial resistance is an increasingly serious threat to global public health which causes a need of immediate action against. By periodically screening of antimicrobial resistance rates, statistics can be obtained and policies can be applied and guided even regionally.

Biography

Ali Korhan Sig has been a Medical Doctor since 2009 and is learning microbiology in Gulhane Military Medical Academy (GATA) since 2012. He is a Member of KLIMUD (Clinical Microbiology and Expertise Association in Turkey) and Turkish Microbiology Community (TMC). He is also studying on *Mycobacterium tuberculosis* and mycobacteria other than tuberculosis.

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