URINE CULTURE RESULTS CORRELATED WITH URINE SEDIMENT TESTS

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Aim: Urinary tract infections are one of the most common reasons for visiting a doctor, but also one of the most common reasons for the use of antibiotics.

Methods: Our investigation was conducted in the Department of Microbiological Diagnostics of the Health Center ,,Aleksinac, in Aleksinac, during 2024. It included urine samples of outpatient and hospital origin. Causes were inoculated on blood agar plates and UTI agar (,,HiMedia,,) and the sediment of each urine was examined. Bacteria were identified based on cultural and biochemical characteristics, and resistance was determined according to EUCAST standards. **Results**: During the work, 364 urine samples were examined, 270 samples of women and 74 of men. However, in 26.29% of women, pathogenic bacteria were cultured in a number that is considered relevant, and in 35.1% of men. The largest number of respondents were aged 70 to 79 (25.82%). 42.3% of the samples were sterile, and in 23.9% of the samples more than 2 bacteria were cultured, and those samples were declared inadequate. Cultivation results were correlated with sediment test results in 87.45% of urine. The most commonly cultivated bacteria was E.coli (57%), followed by Enterobacter spp, Enterococuus faecalis, Proteus mirabilis, Klepsiellla spp and others. Our samples were most sensitive to meropenem (97.7%), imipenem (96.1%), piperacillin-tazobactam (96.1%), cefixime (91.17%), amikacin (71.42%) and ceftriaxone (71.13%). The sensitivity of E.coli isolates to nitroxoline and fosfomycin was high (98% and 97.8).

Discussion: Our results are similar to those of similar studies.

Conclusion: Cultivation results are correlated with urine sediment test results in the largest number of subjects. Since the resistance of E. coli to trimethoprim-sulfomethoxazole is 53.3%, trimethoprim-sulfomethoxazole cannot be used routinely in the treatment of infections caused by this bacterium, and checking the sensitivity of E. coli to trimethoprim in a certain area is a recommendation of the Good Practice Guide.

Keywords: Urine culture, sediment, antibiotics