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STUDY OF BACTERIAL PROFILE AND ANTIMICROBIAL SUSCEPTIBILITY PATTERN OF URINARY TRACT INFECTION IN THE THIRD STATE CENTRAL HOSPITAL

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Objectives : Urinary tract infection (UTI) is a common condition in Mongolia and has contributed to an increasing incidence of infection-related renal abscesses. The aim of this study was to investigate the bacterial profile and antimicrobial resistance patterns among patients hospitalized with UTI in the Department of Nephrology and Urology at the Third State Central Hospital over the past three years.

Methods : A retrospective study was conducted on 441 inpatients diagnosed with UTI and admitted to the Department of Nephrology and Urology at the Third State Central Hospital between 2023 and 2025. Urine culture and identification methods were used to determine bacterial growth and species distribution. Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS), version 26.

Results : Among the 441 enrolled patients, 17% were male and 83% were female, indicating a predominance of female patients hospitalized for UTI. No bacterial growth was detected in 57.2% of urine cultures, whereas 42.8% showed positive bacterial growth. Among the culture-positive cases, *Escherichia coli* accounted for 72.8%, *Klebsiella* spp. for 7.3%, *Enterococcus* spp. for 3.7%, and methicillin-resistant *Staphylococcus aureus* (MRSA) for 2.6%, representing the principal causative pathogens of UTI. Regarding antimicrobial resistance patterns between 2023 and 2025, the highest resistance rates were observed for ampicillin (82.4%, 46.6%, 82.6%), ciprofloxacin (57.9%, 34.6%, 56.7%), and cefazolin (43.2%, 54.7%, 71.4%). The lowest resistance rates were noted for vancomycin and meropenem. Although resistance to nitrofurantoin remained relatively low, an increasing trend was observed from 2023 to 2025.

Conclusions : The high proportion of culture-negative urine samples may be associated with improper specimen collection, prior antibiotic use before testing, or inappropriate and irrational antibiotic consumption. The observed increase in resistance to broad-spectrum antibiotics and the relatively preserved susceptibility to reserve antibiotics during 2023–2025 may further reflect irrational antibiotic use.