

Abstract Code: FDI24574-73

SEX-RELATED DIFFERENCES IN MULTIDRUG RESISTANCE AND OUTCOMES AMONG EMERGENCY DEPARTMENT PATIENTS WITH URINARY TRACT INFECTIONS: THE UTILITY STUDY

C. Nasta¹, L. Onorato², A. Voza³, G. Guiotto⁴, F.G. Numis⁵, F. Dello Vicario⁶, R. Nasti⁷, R. Raucci⁸, N. Coppola², M. Giordano¹
(1) *Department of Advanced Medical and Surgical Sciences, University of Campania "L. Vanvitelli", Naples, Italy,* (2) *Department of Mental Health and Public Medicine, Infectious Diseases Section, University of Campania "L. Vanvitelli", Naples, Italy,* (3) *Emergency Department, IRCCS Humanitas, Milan, Italy,* (4) *Emergency Department, Ospedale del Mare, ASL Napoli 1 Centro, Naples, Italy,* (5) *Emergency Department, Ospedale Santa Maria delle Grazie, ASL Napoli 2 NORD, Pozzuoli, Italy,* (6) *OBI Unit, Ospedale San Giuliano, Giugliano, Italy,* (7) *Emergency Department, Ospedale Betania, Naples, Italy,* (8) *Emergency Department, P.O. Moscati, Aversa, Italy.*

Background. Urinary tract infection represents one of the most common causes of admission to the Emergency Department. Biological sex may influence microbiological profiles and outcomes, but it is unclear whether these differences persist after accounting for age and comorbidity.

Methods. A prospective multicentre cohort study was conducted across eight Emergency Departments in Italy (February 2023–July 2024). Adults with a clinical or microbiological diagnosis of urinary tract infection were enrolled. Data on demographics, comorbidities, microbiology, and outcomes were analysed by sex. Logistic regression adjusted for age and Charlson Comorbidity Index identified predictors of multidrug-resistant infection and 30-day mortality.

Results. A total of 679 patients were included (52.7% male; mean age 65.7 years). Men were older and had a higher comorbidity burden. Multidrug-resistant infection was more frequent in males (46.5%) than in females (33.5%). After adjustment for age and comorbidities, male sex remained an independent predictor of multidrug resistance (odds ratio 1.45; 95% confidence interval 1.03–2.10). Mortality and hospitalization rates were similar between sexes after adjustment.

Conclusions. Male sex independently predicts multidrug-resistant urinary tract infection in the Emergency Department. These findings support a sex- and risk-based approach to empirical antibiotic therapy and stewardship in acute care.