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212. Effectiveness of Empirical Piperacillin/tazobactam Compared to Cefepime for Bloodstream Infection Caused by Gram-Negative Bacilli
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Background. Piperacillin/tazobactam (PTZ) and cefepime (CFP) are commonly used antibiotics for healthcare-associated infections and immunocompromised patients. However, few studies have compared the clinical effectiveness of these two antibiotics. Thus, we compared the effectiveness of empirical PTZ and CFP in patients with monomicrobial bloodstream infection (BSI) caused by gram-negative bacilli.

Methods. We conducted a retrospective cohort study of consecutive, non-duplicate monomicrobial BSIs caused by 1 of 4 taxa (Escherichia coli, Klebsiella pneumoniae, Pseudomonas aeruginosa, and Acinetobacter species) identified from a nationwide, prospective surveillance (Korean Antimicrobial Resistance Surveillance Network [KARS-Net]). Patients who were treated with PTZ or CFP as the only active empirical antibiotic were included. The primary outcome was all-cause, in-hospital 30-day mortality. Logistic regression with backward selection was used to adjust for imbalance in baseline characteristics.

Results. A total of 120 cases were included, among which 87 (72.5%) were treated with PTZ and 33 (27.5%) with CFP. Underlying renal disease was more common in the PTZ group whereas malignancy, septic shock, and neutropenia were more common in the CFP group. (Table 1). All-cause 30-day in-hospital mortality was comparable between the two groups (16.1% vs 12.1%, p=0.777; table 2), as well as attributable mortality. However, the early clinical response at 72 hr was significantly more common in the patients treated with CFP (25.3% vs 57.6%, p=0.001)

The choice of empirical antibiotics was not significantly associated with mortality in a multivariable logistic regression model (Table 3). Older age (≥65 years; adjusted OR, 16.24; 95% CI, 2.21-119.60), lower ECOG (aOR, 2.91 per 1 point, 95% CI, 1.35-6.25), high PITT score (aOR, 1.68; 95% CI, 1.17-6.25) and chronic liver disease (aOR, 39.70; 95% CI, 2.56-615.13) were significant independent risk factors for 30-day in-hospital mortality.

Table 1. Distribution of pathogen and characteristics of patients

Table 2. All-cause mortality

Table 3. Multivariable analysis of the predictors of all-cause mortality

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Conclusion. In patients with BSI caused by gram-negative bacilli, empirical use of either PTZ or CFP was associated with comparable clinical outcomes.

Disclosures. All Authors: No reported disclosures