

Category : **Infections + antimicrobials**

A105 - Characteristics and risk factors in intensive care unit patients with bacteremia and pneumonia caused by carbapenem-resistant klebsiella pneumoniae

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Introduction:

Infections caused by carbapenem-resistant *Klebsiella pneumoniae* (CRKP) have emerged as a serious threat to the lives of patients in intensive care units (ICUs). We aimed to identify predictive factors for ICU patients with CRKP-induced bacteremia and pneumonia to enhance treatment and prognosis.

Methods:

We conducted a retrospective study involving data from ICU-treated patients with CRKP-induced bacteremia and pneumonia at Chang Gung Memorial Hospital, Linkou branch from January 2017 to December 2021. Clinical characteristics, laboratory data, as well as treatment and outcome information were collected. Predictive factors were analyzed using statistical methods to determine their association with outcomes.

Results:

A total of 161 patients were included in the study. Thirty-day mortality was reported for 105 patients (65%). Most CRKP clinical isolates were carbapenemase producers (132/161; 81.9%), of which *K. pneumoniae* carbapenemase (KPC)-producing isolates were most prevalent (112/132; 84.8%). Cox regression analysis revealed that a Ceftazidime-Avibactam-containing antibiotic regimen (hazard ratio (HR) 0.22, confidence interval (CI) 95% 0.10–0.50, $p < 0.001$) and the use of active antibiotics within 48 hours (HR 0.47, CI 95% 0.26–0.85, $p = 0.013$) were associated with a favorable outcome, while a high sequential organ failure assessment (SOFA) score (HR 1.24, CI 95% 1.15–1.35, $p < 0.001$) was associated with death.

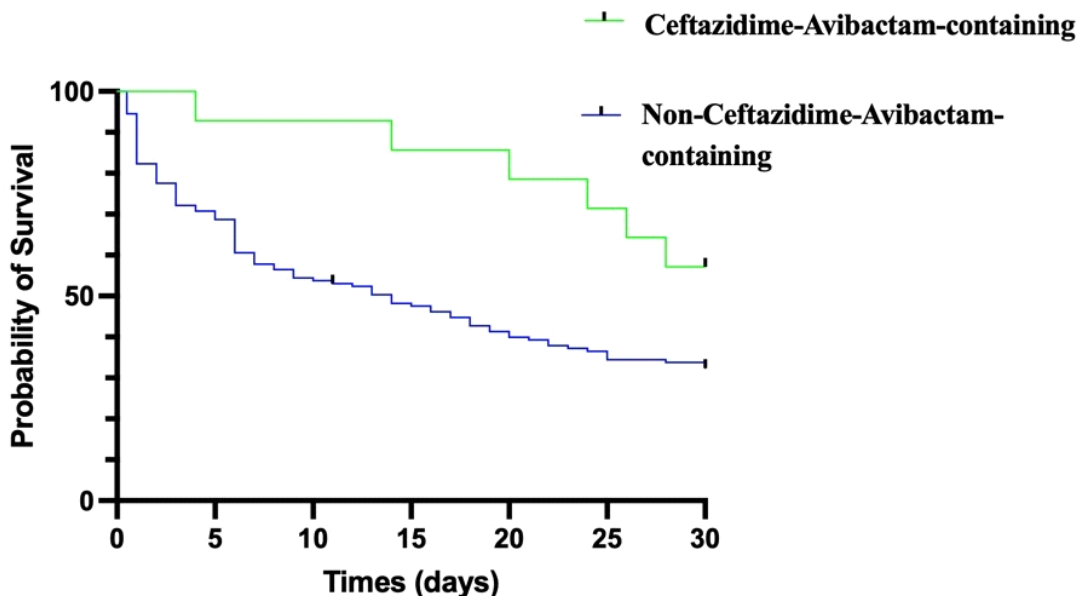
Conclusion:

The use of a definitive antibiotic within 48 hours and a Ceftazidime-Avibactam-containing antibiotic regimen had a better 30-day mortality outcome. Early detection of the pathogen and specific isolates is important in clinical practice and can improve mortality.

References:

Clinical characteristics and risk factors associated with secondary bloodstream infection in patients with intensive care unit-acquired pneumonia due to carbapenem-resistant *Klebsiella pneumoniae*. *Chin Med J (Engl)*. 2021 Jul 20;134(14):1735-1737.

Image :



Kaplan-Meier curves for survival of patients with Ceftazidime-Avibactam-containing and non Ceftazidime-Avibactam-containing antibiotic.