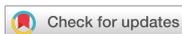


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Early Intravenous Colistin Therapy as a Favorable Prognostic Factor for 28-day Mortality in Patients with CRAB Bacteremia: a Multicenter Propensity Score-Matching Analysis

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ABSTRACT

Background: Carbapenem-resistant *Acinetobacter baumannii* (CRAB) infection is associated with high mortality. One of the strategies to reduce the mortality in patients with CRAB infections is to use intravenous colistin early but the effect of this strategy has not been proven. Therefore, we investigated the association of early colistin therapy with 28-day mortality in patients with CRAB bacteremia.

Methods: This retrospective multicenter propensity score-matching analysis was conducted in the Korea by reviewing the medical records of adult patients with CRAB bacteremia between January 2012 and March 2015. Early colistin therapy was defined as intravenous colistin administration for > 48 hours within five days after the blood culture collection. To identify the risk factors associated with the 28-day mortality in CRAB bacteremia, the clinical variables of the surviving patients were compared to those of the deceased patients.

Results: Of 303 enrolled patients, seventy-six (25.1%) patients received early colistin therapy. The 28-day mortality was 61.4% (186/303). Fatal or rapidly-fatal McCabe classifications, intensive care unit admission, Sequential Organ Failure Assessment scores ≥ 8 , vasopressor use, and acute kidney injury were statistically independent poor prognostic factors. Catheter-related infection and early colistin therapy (adjusted odds ratio [aOR], 0.45; 95% confidence interval [CI], 0.21–0.94) were independent favorable prognostic factors associated with 28-day mortality in patients with CRAB bacteremia. Early colistin therapy was still significantly associated with lower 28-day mortality in the propensity score-matching analysis (aOR, 0.31; 95% CI, 0.11–0.88).

Conclusion: This study suggests that early colistin therapy might help reduce the mortality of patients with CRAB bacteremia.

Keywords: *Acinetobacter*; Bacteremia; Mortality; Early; Colistin

