

# Risk factors and outcomes for patients with carbapenem-resistant *Acinetobacter baumannii* bacteraemia

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## Objectives

Carbapenem-resistant *Acinetobacter baumannii* (CRAB) is an increasingly common nosocomial pathogen in China. Identifying patients at risk for bloodstream infection (BSI) due to CRAB and providing early appropriate therapy are critical for improving patient outcomes.

## Methods

This retrospective case-control study included all patients from the Chinese antimicrobial resistance surveillance of nosocomial infections (CARES) program with CRAB on blood culture between 2009 and 2013. Case patients (CRAB) and control patients (carbapenem-susceptible *Acinetobacter baumannii*, CSAB) were compared for age, gender, underlying disease, invasive devices, ICU stay, prior antibiotic use, presence of fever and outcome.

## Results

One hundred and nineteen cases and 50 controls were included. Independent risk factors associated with BSI due to CRAB included the presence of an indwelling central venous line (odds ratio [OR], 4.246;  $P = 0.001$ ), tracheal intubation (OR, 3.545;  $P = 0.001$ ), ICU stay (OR, 1.415;  $P = 0.001$ ) and the prior receipt of carbapenems (OR, 2.871;  $P = 0.002$ ). The mortality of the case patients (8.4%, 10/119) was higher than the control patients (4%, 2/50).

**Conclusion** BSIs due to CRAB are more common among patients who are heavily exposed to invasive devices, ICU stay and carbapenems.

**Keywords** bacteraemia; carbapenem-resistant *Acinetobacter baumannii*; risk factors

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