LB-RES-028

APCCMI2025 BANGKOK

Prevalence of *Acinetobacter baumanii* Infection in a Tertiary Hospital: Antimicrobial Resistance Pattern and Outcome

Jo Queenstein Lydia L. Robel, MD
Ralph N. Aniceto, MD, FPCP
Antonio E. Lim, Jr., RMT, Ph. D, FPASMAP

Background: *Acinetobacter baumannii* is a significant pathogen responsible for hospital-acquired infections, especially in intensive care units, and among critically ill patients. Known for its multidrug resistance, it presents significant challenges in treatment.

Aim: This study aimed to determine the prevalence of *Acinetobacter baumanii* infection in Divine Word Hospital, Tacloban City, Leyte from January 2022 to December 2023. It aimed to describe the demographic and clinical profile of patients with confirmed isolates, determining the antibiotic resistance pattern, determine the clinical outcomes of patients, and determine if there is an association between the clinico-demographic profile and antimicrobial resistance result.

Study Design: Retrospective study.

Methods: A total of 11,576 inpatient requests for culture and sensitivity tests were reviewed from the bacteriology laboratory with 131 patients testing positive for *A. baumannii.* Demographic and clinical profiles were gathered, including age, sex, comorbidities, types of admission, duration of hospital stay, and presence of invasive medical devices, along with culture and sensitivity results, and clinical outcomes of patients with the infection.

Results: The prevalence of *A. baumani*i infection in our center is 1.13%. Majority of these patients were over 60 years of age (53%), with females constituting 52% of the cases. Comorbidities such as cardiovascular diseases (34%), endocrine/ metabolic diseases (20%), renal diseases (16%), and pulmonary diseases (13%) were commonly observed in affected patients. 79% of the patients with the infection were admitted to the ward. A hospital stay of 1-7 days was observed in 62% of patients. The presence of invasive medical devices like Foley catheters (29.6%), nasogastric tubes (20%), and endotracheal tubes (12.6%) was associated with higher infection rates. Eight different antimicrobial agents were administered to patients with *A. baumanii* infection. Four antibiotics - Cefepime, Ciprofloxacin, Clarithromycin, and Gentamicin - showed 100% sensitivity against the *A. baumanii* isolates. Ceftriaxone showed a high resistance rate of 58%. 70% of the patients improved and 19% of patients were discharged but not improved, and 11% expired. A significant association was found between antimicrobial susceptibility results and factors such as sex, type of admission, presence of invasive medical devices, type of specimen collected, and combating of specimen collection.

Conclusion: This study underscores the urgent need for improved infection control measures, antibiotic stewardship, and ongoing surveillance to combat the growing threat of drug- resistant *A. baumannii* in healthcare settings. The findings contribute valuable data for healthcare providers, pharmaceutical companies, and policymakers working towards improving infection management, and combatting antimicrobial resistance.