

ABSTRACT

THE RELATIONSHIP BETWEEN THE RATIONAL USE OF “RESERVE” ANTIBIOTIC USE AND CLINICAL IMPROVEMENT OF SEPSIS PATIENTS IN THE INTENSIVE CARE UNIT (ICU) RSUD DR. H. ABDUL MOELOEK PROVINSI LAMPUNG

By

AULIA SABRINA HAFIZOH

Background: Antibiotic resistance is a significant global health problem that **contributes** to increased morbidity and mortality, including in sepsis patients in the ICU. The use of reserve group antibiotics as a last-line therapy needs to be rational to prevent further resistance. However, variations in antibiotic use practices and limitations in data regarding their relationship with patients' clinical improvement still exist. Therefore, this study aims to analyse the relationship between the rationality of reserve antibiotic use and clinical improvement in sepsis patients in the ICU.

Methods: This study used a descriptive observational design with a retrospective cross-sectional approach. Data were obtained from the medical records of sepsis patients in the ICU of RSUD Dr. H. Abdul Moeloek, Lampung Province, in 2025 using a total sampling technique. The rationality of antibiotic use was assessed using the Gyssens method, while clinical improvement was measured based on changes in leukocyte values. Data analysis included univariate and bivariate analyses.

Results: A total of 12 patients met the inclusion criteria. The most commonly used antibiotic was meropenem (41.67%). The evaluation using the Gyssens method showed that 75% of antibiotic use was rational (category 0), while 25% could not be evaluated (category VI). However, the analysis of clinical improvement could only be performed on a small portion of the sample due to incomplete leukocyte data. Consequently, the analysis of the relationship between antibiotic rationality and clinical improvement could not be conducted statistically.

Conclusion: The use of reserve antibiotics in sepsis patients in the ICU was mostly rational. However, the relationship between the rationality of antibiotic use and clinical improvement could not be determined due to limitations in clinical data. Improvements in the quality of medical record documentation and prospective studies were needed to obtain more optimal results.

Keywords: Clinical improvement, Gyssens method, ICU, rationality, reserve antibiotics, sepsis

ABSTRAK

HUBUNGAN RASIONALITAS PENGGUNAAN ANTIBIOTIK KELOMPOK *RESERVE* TERHADAP PERBAIKAN KLINIS PASIEN SEPSIS DI *INTENSIVE CARE UNIT (ICU)* RSUD DR. H. ABDUL MOELOEK PROVINSI LAMPUNG

Oleh

AULIA SABRINA HAFIZOH

Latar Belakang : Resistensi antibiotik merupakan masalah kesehatan global yang signifikan dan berdampak pada meningkatnya angka morbiditas serta mortalitas, termasuk pada pasien sepsis di ICU. Penggunaan antibiotik kelompok *reserve* sebagai terapi lini terakhir perlu dilakukan secara rasional untuk mencegah resistensi lebih lanjut. Namun, masih terdapat variasi dalam praktik penggunaan antibiotik serta keterbatasan data terkait hubungannya dengan perbaikan klinis pasien. Oleh karena itu, penelitian ini dilakukan untuk menganalisis hubungan rasionalitas penggunaan antibiotik kelompok *reserve* terhadap perbaikan klinis pasien sepsis di ICU.

Metode : Penelitian ini menggunakan desain observasional deskriptif dengan pendekatan *cross-sectional* secara retrospektif. Data diperoleh dari rekam medis pasien sepsis di ICU RSUD Dr. H. Abdul Moeloek Provinsi Lampung tahun 2025 dengan teknik *total sampling*. Rasionalitas penggunaan antibiotik dinilai menggunakan metode Gyssens, sedangkan perbaikan klinis diukur berdasarkan perubahan nilai leukosit. Analisis data meliputi univariat dan bivariat.

Hasil : Sebanyak 12 pasien memenuhi kriteria penelitian. Antibiotik yang paling banyak digunakan adalah meropenem (41,67%). Hasil evaluasi metode Gyssens menunjukkan 75% penggunaan antibiotik tergolong rasional (kategori 0) dan 25% tidak dapat dievaluasi (kategori VI). Namun, analisis perbaikan klinis hanya dapat dilakukan pada sebagian kecil sampel karena keterbatasan data leukosit. Akibatnya, analisis hubungan antara rasionalitas antibiotik dan perbaikan klinis tidak dapat dilakukan secara statistik.

Kesimpulan : Penggunaan antibiotik kelompok *reserve* pada pasien sepsis di ICU sebagian besar sudah rasional. Namun, hubungan antara rasionalitas penggunaan antibiotik dengan perbaikan klinis belum dapat dibuktikan karena keterbatasan data klinis. Perlu peningkatan kualitas dokumentasi rekam medis serta penelitian prospektif untuk memperoleh hasil yang lebih optimal.

Kata Kunci : Antibiotik *reserve*, ICU, metode Gyssens, perbaikan klinis, rasionalitas, sepsis