ABSTRAK

LATAR BELAKANG: *Pandrug resistant organism* (PDR) adalah suatu mikroorganisme yang resisten terhadap seluruh antimikroba pada tiap kelas antimikroba. Prevalensi infeksi oleh bakteri gram negatif PDR antara 0,01-21% dengan mortalitas antara 20-71%. Belum ada data faktor-faktor prognostik survival pada pasien dengan bakteremia gram negatif PDR di RSUP Dr. Kariadi Semarang.

TUJUAN: Mengidentifikasi faktor-faktor prognostik survival pada pasien rawat inap dengan bakteremia gram negatif PDR di RSUP Dr. Kariadi Semarang

METODE: Penelitian dengan desain retrospektif kohort, menggunakan rekam medis pasien yang dirawat di RSUP Dr. Kariadi Semarang selama Januari 2020-Desember 2022 dengan kriteria inklusi episode pertama bakteremia dan hasil kultur darah bakteri gram negatif PDR selama periode tersebut. Berbagai faktor prognostik diidentifikasi dan dianalisis menggunakan uji *Chi Square* atau *Fisher's exact* untuk analisis bivariat dan uji multipel regresi logistik untuk analisis multivariat.

HASIL: Dari 14.610 sampel kultur darah selama periode waktu tersebut, terdapat 35 sampel bakteri gram negatif PDR. Jenis bakteri gram negatif PDR yang didapatkan ialah *Acinetobacter baumannii* (80%), *Pseudomonas aeruginosa* (8,6%), *Klebsiella pneumoniae* (5,6%), *Acinetobacter spp* serta *Pseudomonas putida* masing masing sebesar 2,9%. Terapi kombinasi ≥ 3 jenis antibiotik merupakan faktor prognostik independen survival dengan RP 32,50;CI 95% 3,670-287,841; *p*=0,002.

KESIMPULAN: Prevalensi bakteremia gram negatif PDR pada periode Januari 2020-Desember 2022 sebesar 3,56%, dengan *Acinetobacter baumannii* sebagai penyebab terbanyak bakteremia gram negatif PDR. Terapi kombinasi ≥ 3 jenis antibiotik merupakan faktor prognostik survival pasien rawat inap bakteremia gram negatif *Pandrug resistant*

Kata kunci: Bakteri gram negatif *Pandrug resistant*, bakteremia, faktor prognostik survival

ABSTRACT

BACKGROUND: *Pandrug resistant* organism (PDR) is microorganism which is resistant to all antimicrobial agents in each class of antimicrobials tested for each type of bacteria. The prevalence of PDR gram-negative bacteria varies between 0,01-21% and the mortality varies between 20-71%. There is no data on the factors that identify occurrence of PDR gram-negative bacterial infection in Dr. Kariadi General Hospital.

OBJECTIVE: To identify prognostic factors of survival in patients with PDR gram-negative bacteremia hospitalized in Dr. Kariadi hospital.

METHODS: Retrospective cohort study of inpatient's medical records during period of January 2020–December 2022 was done. Inclusion criteria was first episode of bacteremia for inpatients with PDR gram-negative bacteria in blood culture results. Various prognostic factors were identified and analyzed using Chi Square or Fisher's exact test for bivariate analysis and multiple logistic regression test for multivariate analysis.

RESULTS: Total of 14.610 blood cultures in that period were found in which 35 PDR gram-negative bacteremia patients. The bacteria isolated were *Acinetobacter baumannii* (80%), *Pseudomonas aeruginosa* (8,6%), *Klebsiella pneumoniae* (5,6%), *Acinetobacter spp* and *Pseudomonas putida* 2,9% respectively. In multivariate analysis, combination therapy with ≥ 3 types of antibiotics was independent prognostic factor for survival (RP 32,50; 95% CI 3,670-287,841; *p*=0,002).

CONCLUSION: The prevalence of PDR gram-negative bacteremia in that period was 3,56% in which *Acinetobacter baumannii* as the most isolates. Combination therapy with ≥ 3 types of antibiotics is prognostic factor of survival for PDR gram-negative bacteremia patients.

Keywords: *Pandrug resistant* gram-negative bacteria, bacteremia, prognostic factor of survival