

## INTISARI

**Latar belakang:** Penggunaan antibiotik yang tidak tepat berdampak buruk pada respon klinis dan ancaman berkembangnya mikroba resistan. Panduan Penggunaan Antibiotik (PPAB) disusun untuk memberikan panduan dalam memilih antibiotik. Implementasi PPAB di RSUP Dr. Sardjito belum pernah dievaluasi.

**Tujuan:** Mengevaluasi hubungan kesesuaian terapi antibiotik definitif berbasis Panduan Penggunaan Antibiotik (PPAB) dengan respon klinis kasus infeksi di RSUP Dr. Sardjito Yogyakarta.

**Metode:** Penelitian ini adalah penelitian observasional-analitik dengan rancangan retrospektif-longitudinal. Subjek dikelompokkan berdasarkan kesesuaian terapi antibiotik definitif dengan PPAB. Respon klinis dikelompokkan menjadi berespon baik dan belum/tidak berespon baik, dievaluasi dalam waktu 14 hari. Variabel lainnya dikategorikan sesuai kebutuhan penelitian. Analisis korelasi koefisien kontingensi dilakukan untuk mengetahui hubungan kesesuaian terapi antibiotik definitif dengan respon klinis kasus infeksi. Analisis regresi logistik digunakan untuk menganalisis faktor lainnya yang berhubungan dengan capaian respon klinis kasus infeksi.

**Hasil:** Sebanyak 220 subjek diikutsertakan dalam penelitian. Median usia subjek adalah 54,5 tahun (18-85), sebanyak 117 subjek (53,2%) berjenis kelamin pria, dan 103 subjek (46,8%) berjenis kelamin wanita. Subjek dengan skor qSOFA < 2 sebanyak 171 (77,7%), dan skor qSOFA ≥ 2 sebanyak 49 (22,3%). Strata 1 memiliki 13 subjek (5,9%), strata 2 memiliki 101 subjek (45,9%), dan strata 3 memiliki 106 subjek (48,2%). Antibiotik definitif secara komprehensif sesuai dengan PPAB berjumlah 112 (50,9%), dan yang tidak sesuai dengan PPAB berjumlah 108 (49,1%). Dari 220 subjek, 181 subjek (82,3%) berespon baik dan 39 subjek (17,7%) belum/tidak berespon baik terhadap terapi antibiotik definitif. Hasil analisis korelasi koefisien kontingensi menunjukkan adanya hubungan yang bermakna antara kesesuaian terapi antibiotik definitif dengan respon klinis kasus infeksi ( $p < 0,001$  ; koefisien korelasi ( $r$ ) = 0,250). Hasil analisis regresi logistik menunjukkan faktor-faktor yang berhubungan secara independen dengan respon klinis 'baik' pada kasus infeksi adalah antibiotik definitif sesuai PPAB ( $p = 0,005$  ; OR = 3,29), usia < 65 tahun ( $p = 0,004$  ; OR = 3,35), infeksi oleh non-bakteri multiresistan ( $p = 0,013$  ; OR = 2,78), dan skor qSOFA < 2 ( $p = 0,031$  ; OR = 2,57).

**Simpulan:** Terdapat hubungan yang bermakna antara kesesuaian terapi antibiotik definitif berbasis PPAB dengan respon klinis kasus infeksi. Terapi antibiotik definitif sesuai dengan PPAB memiliki kemungkinan mendapatkan respon klinis berespon baik tiga kali lebih besar dibandingkan terapi antibiotik definitif tidak sesuai dengan PPAB.

**Kata kunci:** antibiotik definitif, PPAB, resistansi antibiotik, respon klinis.

## ABSTRACT

**Background:** Inappropriate use of antibiotics has negative impact on clinical response and the threat of resistant microbials growth. The guideline of antibiotics use was developed to provide guidance in selecting antibiotics. The implementation of the guideline in Dr. Sardjito General Hospital has never been evaluated.

**Objective:** To evaluate the relationship between the suitability of definitive antibiotic therapy based on guideline of antibiotics use and clinical response of infection cases in Dr. Sardjito General Hospital.

**Method:** This study is analitic-observational study with retrospective-longitudinal design. The subjects were categorized based on the suitability of definitive antibiotic therapy with the guideline of antibiotics use. The clinical responses were grouped into well response and not well response, evaluated in 14 days. The other variables were grouped according to study needs. Analysis of Contingency Coefficient Correlation was performed to determine the correlation between the suitability of definitive antibiotic therapy and clinical responses. Multivariate logistic regression analysis was performed to analized the other factors associated to clinical responses.

**Result:** A total of 220 patients were included in the study. The median age of subjects was 54.5 y.o (18 – 85), a total 117 subject (53.2%) were male, and 103 subjects (46.8%) were female. Subjects with qSOFA score < 2 were 171 (77.7%), and qSOFA score  $\geq$  2 were 49 (22.3%). Strata 1 had 13 subjects (5.9%), strata 2 had 101 subjects (45.9%), and strata 3 had 106 subjects (48.2%). The comprehensive total number of definitive antibiotics in accordance with guideline of antibiotic's use were 112 (50.9%), and not in accordance with the guideline of antibiotics use were 108 (49.1%). From 220 subjects, 181 subjects (82.3%) were well response dan 39 subjects (17.7%) were not well response to definitive therapy. The results of Contingency Coefficient Correlation analysis show that there is a significant correlation between the suitability of definitive antibiotic therapy with clinical responses of infection ( $p < 0.001$  ; coefficient of correlation ( $r$ ) = 0.250). The results of logistic regression analysis show other factors associated independently with the 'well' clinical response are definitive antibiotic in accordance with the guideline of antibiotics use ( $p = 0.005$  ; OR = 3.29), age < 65 y.o ( $p = 0.004$  ; OR = 3.35), infection of non-MDR bacteria ( $p = 0.013$  ; OR = 2.78), and qSOFA score < 2 ( $p = 0.031$  ; OR = 2.57).

**Conclusion:** There is a significant correlation between suitability of definitive antibiotics therapy based on guideline of antibiotics use and clinical response of infection cases. Definitive antibiotics therapy are in accordance with the guideline of antibiotics use have three times greater of possibillity to get well response on clinical response compared definitive antibiotics therapy are not in accordance with the guideline of antibiotics use.

**Keywords:** definitive antibiotic, guideline of antibiotics use, antibiotic resistances, clinical response.