

ABSTRACT

ANALYSIS OF COST DIFFERENCES IN RESERVE ANTIBIOTICS USING THE ATC/DDD METHOD BASED ON ANTIBIOTIC SENSITIVITY LEVELS AT DR. H. ABDUL MOELOEK HOSPITAL LAMPUNG PROVINCE

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Background: Reserve antibiotics serve as the last line of treatment for severe infections. However, they are generally associated with high average costs. This study aims to analyze the cost differences of reserve antibiotics based on their sensitivity levels, in order to optimize antibiotic use and reduce the risk of resistance.

Methods: This study was an analytical observational study with a cross-sectional design from the hospital's perspective. Data were collected retrospectively through special antimicrobial request forms (reserve category). A total of 273 samples were included using a total sampling technique.

Results: The majority of hospitalized patients who used reserve antibiotics were male (54.9%), with the most common age categories being adults (18–59 years) at 35.9% and toddlers (0–5 years) at 29.7%. Based on the distribution of inpatient wards, most patients were treated in the Perinatology ward (21.6%) and the ICU (15.4%). The most frequently used reserve antibiotic was meropenem (37.4%), and the most commonly identified bacteria were Gram-negative bacteria (71,34%). The highest average cost of antibiotic use was vancomycin, at IDR32.485.000. Gram-negative bacteria showed high sensitivity to amikacin, meropenem, and moxifloxacin, while Gram-positive bacteria showed high sensitivity to vancomycin and linezolid.

Conclusion: There was a difference in the cost of reserve antibiotics based on antibiotic sensitivity levels at RSUD Dr. H. Abdul Moeloek, Lampung Province.

Keywords: Antibiogram, ATC/DDD, Reserve Antibiotics, Sensitivity Level

ABSTRAK

ANALISIS PERBEDAAN BIAYA ANTIBIOTIK KELOMPOK *RESERVE* DENGAN METODE ATC/DDD BERDASARKAN TINGKAT SENSITIVITAS ANTIBIOTIK DI RSUD DR. H. ABDUL MOELOEK PROVINSI LAMPUNG

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Latar Belakang: Antibiotik *reserve* berperan sebagai pilihan terakhir dalam penanganan infeksi berat. Namun, antibiotik *reserve* memiliki rata-rata biaya yang tinggi. Penelitian ini bertujuan untuk menganalisis perbedaan biaya antibiotik *reserve* berdasarkan tingkat sensitivitasnya, guna mengoptimalkan penggunaan antibiotik dan menekan risiko resistensi.

Metode: Penelitian ini adalah penelitian analitik observasional dengan desain penelitian *cross-sectional* berdasarkan perspektif rumah sakit. Pengambilan data dilakukan secara retrospektif melalui formulir permintaan antimikroba pengendalian khusus (*reserve*). Jumlah sampel sebanyak 273 dan dipilih menggunakan teknik *total sampling*.

Hasil: Mayoritas pasien rawat inap yang menggunakan antibiotik *reserve* adalah laki-laki (54,9%), dengan usia kategori dewasa (18-59 tahun) (35,9%) dan usia balita (0-5 tahun) (29,7%). Berdasarkan distribusi ruangan rawat inap mayoritas berada di ruang Perinatologi (21,6%) dan ruang ICU (15,4%). Penggunaan antibiotik *reserve* terbanyak adalah meropenem (37,4%) dengan bakteri yang paling banyak ditemukan adalah bakteri Gram-negatif (71,34%). Total biaya rata-rata penggunaan antibiotik terbesar adalah vankomisin sebesar Rp32.485.000. Bakteri Gram-negatif menunjukkan sensitivitas tinggi pada antibiotik amikasin, meropenem, dan moksifloksasin sementara pada bakteri Gram-positif menunjukkan sensitivitas tinggi pada vankomisin dan linezolid.

Kesimpulan: Terdapat perbedaan biaya antibiotik *reserve* berdasarkan tingkat sensitivitas antibiotik di RSUD Dr. H. Abdul Moeloek Provinsi Lampung.

Kata Kunci: Antibiotik *Reserve*, ATC/DDD, Tingkat Sensitivitas