

ABSTRACT

BACTERIAL PATTERNS AND SENSITIVITY TO ANTIBIOTICS IN PATIENTS WITH LOWER RESPIRATORY TRACT INFECTIONS

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Lower Respiratory Tract Infection (RSI) is one of the leading causes of morbidity and mortality worldwide, which can be caused by various microorganisms. The increase in RSI cases and the irrational use of antibiotics can trigger antibiotic resistance. This study aims to determine bacterial patterns and antibiotic sensitivity patterns in patients with RSI. This study used a retrospective descriptive design using secondary data from the results of sputum culture examinations of RSI patients. The study sample was all patients with positive culture results who underwent antibiotic sensitivity testing at the Clinical Microbiology Laboratory of Klungkung Regional Hospital from January to December 2025, totaling 152 patients. The results showed that the dominant male gender suffered from RSI, as many as 96 people (63%). The age of respondents suffering from RSI was predominantly 18-65 years old, as many as 73 people (48%). The bacterial pattern in RSI patients found Gram-positive bacteria as many as 31 samples (10%) and Gram-negative bacteria as many as 121 samples (90%). The sensitivity pattern of Gram-positive bacteria to antibiotics in ISNB patients with positive culture results showed the highest sensitivity to Tigecycline-TGC antibiotics in 17 samples, the highest intermediate to Tigecycline-TGC antibiotics in 7 samples and the highest resistance to Gentamicin-GM antibiotics in 16 samples. The sensitivity pattern of Gram-negative bacteria to antibiotics in ISNB patients with positive culture results showed the highest sensitivity to Amikacin antibiotics in 102 samples, the highest intermediate to Piperacilin/Tazobactam antibiotics in 20 samples and the highest resistance to Ciprofloxacin-CIP antibiotics in 87 samples.

Keywords: Antibiotics, LRTI, Bacterial pattern, Sputum

ABSTRAK

POLA BAKTERI DAN KEPEKAANNYA TERHADAP ANTIBIOTIK PADA PENDERITA INFEKSI SALURAN NAFAS BAWAH

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Infeksi Saluran Napas Bawah (ISNB) merupakan salah satu penyebab utama morbiditas dan mortalitas di dunia yang dapat disebabkan oleh berbagai mikroorganisme. Peningkatan kasus ISNB serta penggunaan antibiotik yang tidak rasional dapat memicu terjadinya resistensi antibiotik. Penelitian ini bertujuan untuk mengetahui pola bakteri dan pola kepekaan antibiotik pada penderita infeksi saluran napas bawah (ISNB). Penelitian ini menggunakan desain deskriptif retrospektif dengan menggunakan data sekunder dari hasil pemeriksaan kultur sputum pasien ISNB. Sampel penelitian adalah seluruh pasien dengan hasil kultur positif yang menjalani pemeriksaan uji kepekaan antibiotik di Laboratorium Mikrobiologi Klinik RSUD Klungkung pada periode Januari hingga Desember 2025 sebanyak 152 pasien. Hasil penelitian menunjukkan jenis kelamin laki-laki dominan menderita ISNB sebanyak 96 orang (63%). Usia responden menderita ISNB dominan 18 – 65 tahun sebanyak 73 orang (48%). Pola bakteri pada penderita ISNB ditemukan bakteri Gram positif sebanyak 31 sampel (10%) dan bakteri Gram negatif sebanyak 121 sampel (90%). Pola kepekaan bakteri Gram positif terhadap antibiotik pada penderita ISNB dengan hasil kultur positif menunjukkan sensitivitas tertinggi terhadap antibiotik Tigecycline-TGC sebanyak 17 sampel (54,8%), intermediate tertinggi terhadap antibiotik Tigecycline-TGC sebanyak 7 sampel (22,6%) dan resistensi tertinggi terhadap antibiotik Gentamicin-GM sebanyak 16 sampel (51,6%). Pola kepekaan bakteri Gram negatif terhadap antibiotik pada penderita ISNB dengan hasil kultur positif menunjukkan sensitivitas tertinggi terhadap antibiotik Amikacin sebanyak 102 sampel (84,2%), intermediate tertinggi terhadap antibiotik Piperacilin/Tazobactam sebanyak 20 sampel (16,5%) dan resistensi tertinggi terhadap antibiotik Ciprofloxacin-CIP sebanyak 87 sampel (72,0%).

Kata Kunci: Antibiotik, ISNB, Pola bakteri, Sputum