

## INTISARI

**Winata suryadi, M.G., 2019. POLA SENSITIVITAS *Klebsiella sp.* DARI SPUTUM PASIEN PNEUMONIA DI RSUD Dr. MOEWARDI SURAKARTA TERHADAP ANTIBIOTIK SIPROFLOKSASIN, AZITROMISIN, GENTAMISIN, DAN IMPENEM SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.**

Pneumonia merupakan penyakit infeksi saluran pernafasan akut bagian bawah. Mikroorganisme penyebab pneumonia terbanyak yang didapatkan adalah *Klebsiella pneumoniae*. Tujuan dari penelitian ini adalah untuk mengisolasi bakteri *Klebsiella sp.* dari sputum pasien pneumonia di RSUD Dr. Moewardi dan mengetahui pola sensitivitas antibiotik siprofloksasin, azitromisin, imipenem, dan gentamisin terhadap *Klebsiella sp.*

Sampel sputum yang diperoleh diisolasi pada media *Mac Conkey agar*. Hasil isolasi diidentifikasi pada pewarnaan Gram, pengecatan kapsul, dan uji biokimia. Metode uji sensitivitas dengan difusi cakram. Hasil zona hambat yang terbentuk dari cakram antibiotik, dibandingkan dengan standar CLSI 2017 (*Clinical and Laboratory Standards institute*). Analisis data menggunakan tabulasi dan diagram batang untuk melihat prosentase tingkat pola sensitivitas antibiotik.

Penelitian ini dilakukan terhadap 40 sampel penderita pneumonia di RSUD Dr. Moewardi 26 sampel positif terdapat bakteri *Klebsiella sp.* dan 14 sampel negatif *Klebsiella sp.* Prosentase tingkat pola sensitivitas antibiotik siprofloksasin 88,89%., intermediate 11,11%., azitromisin sensitif 29,63%., resisten 70,37%., imipenem sensitif 74,07%., intermediate 7,41%., resisten 18,52%., gentamisin sensitif 48,15%., intermediate 51,85%. Tingkat sensitivitas paling tertinggi adalah siprofloksasin efektif terhadap *Klebsiella sp.* dengan menghambat enzim topoisomerase II (DNA *gyrase*) dan topoisomerase IV yang diperlukan bakteri dalam proses replikasi, transkripsi, perbaikan, dan rekombinasi DNA.

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**Kata kunci** :Pneumonia, *Klebsiella sp.*, identifikasi, uji sensitifitas, antibiotik

## ABSTRACT

**Winata suryadi, M.G., 2019. SENSITIVITY PATTERN *Klebsiella sp.* FROM PNEUMONIA PATIENT SPUTUMS IN RSUD Dr. MOEWARDI SURAKARTA AGAINTS CIPROFLOXASIN, AZITROMICIN, GENTAMICIN, AND IMPENEM ANTIBIOTIC, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.**

Pneumonia is an acute lower respiratory tract infection. The most common microorganism that causes pneumonia is *Klebsiella pneumoniae*. The purpose of this study was to isolate the bacteria *Klebsiella sp.* from sputum pneumonia patients at RSUD Dr. Moewardi and know the sensitivity pattern of antibiotics ciprofloxacin, azithromycin, imipenem, and gentamicin against *Klebsiella sp.*

The obtained sputum sample was isolated on *Mac Conkey agar* media. The results of isolation were identified in Gram stain, capsule staining, and biochemical tests. Sensitivity test method with disk diffusion. Inhibition zone results formed from antibiotic discs, compared with CLSI 2017 (*Clinical and Laboratory Standards Institute*) standards. Data analysis uses tabulations and bar charts to see the percentage level of antibiotic sensitivity patterns.

This research was conducted on 40 samples of patients with pneumonia in Dr. Moewardi 26 positive samples contained *Klebsiella sp.* and 14 negative samples of *Klebsiella sp.* Percentage of ciprofloxacin antibiotic sensitivity pattern 88.89%, intermediate 11.11%, azithromycin sensitive 29.63%, Resistance 70.37%, Sensitive imipenem 74.07%. 18.52%, Sensitive gentamicin 48.15%, Intermediate 51.85%. The highest level of sensitivity is ciprofloxacin effective against *Klebsiella sp.* by inhibiting the enzymes topoisomerase II (DNA gyrase) and topoisomerase IV required by bacteria in the process of replication, transcription, repair, and recombination of DNA.

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**Keywords:** Pneumonia, *Klebsiella sp.*, Identification, sensitivity test, antibiotics