ABSTRAK

Klebsiella pneumoniae adalah bakteri dengan level resistensi antibiotik yang tinggi dan sering menyebabkan infeksi nosokomial di RS. *Klebsiella pneumoniae* diketahui menjadi satu diantara penyebab pneumonia, bakteremia, infeksi saluran kemih (ISK), infeksi pada luka, dan infeksi intravaskular. *Klebsiella pneumoniae* sering diisolasi dari ICU dan terkait dengan wabah di RS. Di Indonesia tiap tahunnya ditemukan peningkatan kasus resistensi antibiotik yang didapat dari penyakit infeksi, misalnya sepsis dan radang paru-paru. Menurut Kemenkes pada tahun 2019, didapatkan prevalensi bakteri yang membentuk resistensi terhadap sefalosporin generasi 3 mencapai lebih dari 60%. Beberapa antibiotik seperti penisilin, amoksisilin, ampisilin, sefotaksim, levofloksasin, dan eritromisin sudah tidak mempan untuk membunuh bakteri *Klebsiella pneumoniae.*

Tujuan dari penelitian ini adalah untuk mengetahui pola resistensi dari bakteri *Klebsiella pneumoniae* penghasil ESBL agar mengurangi peningkatan resistensi antibiotik terhadap bakteri tersebut. Penelitian ini menggunakan metode deskriptif kuantiitatif dengan desain *cross sectional study* . Penelitian ini dilaksanakan di Laboratorium Bakteriologi Jurusan Teknologi Laboratorium Medis Poltekkes Kemenkes Surabaya pada bulan Oktober 2022 – Mei 2023.

Hasil penelitian yang telah dilakukan dari total sampel 20 sputum penderita pneumonia ditemukan sebanyak 80% (16/20) teridentifikasi sebagai *Klebsiella pneumoniae* penghasil ESBL memiliki resistensi terhadap cefephime, cefotaxime, ceftazidime.

Kata kunci : *Klebsiella pneumoniae*; ESBL; Resistensi; Antibiotik; Vitex2

ABSTRACT

Klebsiella pneumoniae is a bacterium with a high level of antibiotic resistance and often causes nosocomial infections in hospitals. *Klebsiella pneumoniae* is known to be one of the causes of pneumonia, bacteremia, urinary tract infections (UTI), wound infections and intravascular infections. *Klebsiella pneumoniae* is frequently isolated from ICUs and associated with hospital outbreaks. In Indonesia, which is a developing country, every year there is an increase in the prevalence of antibiotic resistance which causes infections, for example sepsis and pneumonia. According to the Ministry of Health in 2019, the prevalence of two types of bacteria that are resistant to 3rd generation cephalosporins reached more than 60%. Several antibiotics such as penicillin, amoxicillin, ampicillin, cefotaxime, levofloxacin, and erythromycin no longer work to kill *Klebsiella pneumoniae* bacteria.

This research aims to determine the resistance pattern of the ESBL-producing *Klebsiella pneumoniae* bacteria in order to reduce the increase in antibiotic resistance against these bacteria. This research uses a quantitative descriptive method with a cross sectional study design. This research was carried out at the Bacteriology Laboratory, Medical Laboratory Technology Department, Health Polytechnic, Ministry of Health, Surabaya in October 2022 – May 2023.

The results of the research conducted from a total of 20 sputum samples from pneumonia sufferers found that 80% (16/20) were identified as ESBL-producing *Klebsiella pneumoniae* having resistance. against cefephime, cefotaxime, ceftazidime.

Keyword : *Klebsiella pneumoniae*; ESBL; Resistance; Antibiotic; vitex2