

Perbandingan kepekaan enterobacteriaceae penghasil extended spectrum beta lactamase (ESBL) terhadap antibiotika golongan kuinolon dan karbapenem di laboratorium mikrobiologi klinik (LMK) Fakultas Kedokteran Universitas Indonesia (FKUI) = A sensitivity comparison of enterobacteriaceae producing extended spectrum of beta lactamase (ESBL) towards class of antibiotics quinolone and carbapenem at clinical microbiology laboratory of Faculty of Medicine University of Indonesia.

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Abstrak

Resistensi antibiotika merupakan tantangan dalam praktik kedokteran. Salah satu prevalensi resistensi yang cenderung meluas secara global adalah terhadap *Enterobacteriaceae* penghasil ESBL, suatu kelompok bakteri yang mampu menghancurkan antibiotika beta-laktam, seperti halnya *E. coli* dan *K. pneumoniae*. Penelitian ini bertujuan untuk membandingkan kepekaan antibiotika golongan kuinolon dan karbapenem terhadap bakteri penghasil ESBL berdasarkan data yang diperoleh dari LMK FKUI sepanjang tahun 2018-2019. Hasil penelitian menunjukkan bahwa prevalensi *E. coli* dan *K. pneumoniae* ESBL positif, kurang dari 5% terhitung tahun 2018 hingga 2019. Prevalensi terbanyak berasal dari kisaran usia > 50 tahun dengan jenis kelamin perempuan. Secara umum sensitivitas ESBL terhadap antibiotika golongan kuinolon kurang dari 50% terhadap *E. coli* dan *K. pneumoniae* ESBL positif dari total 7 pasien yang diperiksa. Sementara itu, sensitivitas antibiotika golongan karbapenem terhadap *E. coli* dan *K. pneumoniae* ESBL positif mencapai 100% dari total 7 pasien yang diperiksa. Saran untuk menurunkan prevalensi infeksi ESBL dapat dilaksanakan melalui pengendalian infeksi, meningkatkan kesiagaan transmisi, dan pengendalian tingkah laku dalam penggunaan antibiotika.

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Antibiotic resistance is considered as a challenging issue in the field of medicine. One of the highest prevalences of antibiotics resistance which tends to constantly increase occurs amongst *Enterobacteriaceae* that produces extended spectrum beta lactamase (ESBL) such as *E. coli* and *K. pneumoniae*, a group of enzyme-producing bacteria that could hydrolyze the beta lactam components. This study aims to compare the sensitivity of class of antibiotics quinolone and carbapenem towards the incidences of ESBL infection during the periods of 2018-2019 at the Clinical Microbiology Laboratory of Faculty of Medicine University of Indonesia. The results showed that the prevalence of both *E. coli* and *K. pneumoniae* infection were less than 5%, both in 2018 and 2019. The highest prevalence of ESBL infection occurred in females aged 50 and above. Generally, the sensitivity of ESBL towards class of quinolone were less than 50% from total of 7 patients that examined. On the otherside, the sensitivity of ESBL towards class of carbapenem reached 100% from total of 7 patients that examined. From this study, it can be suggested to decrease the prevalence of ESBL infections, several measures that should be applied are controlling and preventing the infection, increasing the awareness of transmission-based precautions, and improving rationalization patients behavior of antibiotics.