

INTISARI

Latar Belakang : Prevalensi infeksi Mycobacterium non tuberculosis di beberapa negara mengalami peningkatan. Sulitnya pemilihan antibiotik diakibatkan oleh resistensi bakteri terhadap terapi Mycobacterium tuberculosis. Variasi pola kepekaan bakteri terhadap suatu antibiotik mendorong klinisi untuk melakukan uji potensi antibiotik.

Tujuan : Untuk mengetahui bagaimana tingkat kepekaan Mycobacterium non tuberculosis tipe *rapidly growing* terhadap tetrasiklin secara *in vitro*.

Metode : Desain penelitian ini adalah deskriptif observasional dengan metode *macrobroth dilution test*, menggunakan 10 isolat Mycobacterium tipe *rapidly growing* yang diujikan dengan tetrasiklin secara *in vitro*. Konsentrasi Hambat Minimum (KHM) kemudian diinterpretasikan dengan standar dari *Clinical and Laboratory Standards Institute (CLSI)*. Penelitian ini berlangsung di Laboratorium Mikrobiologi Fakultas Kedokteran Universitas Gadjah Mada.

Hasil : Dari 10 isolat Mycobacterium non tuberculosis, terdapat 6 isolat (60%) dinyatakan *intermediate* terhadap tetrasiklin dengan rentang KHM 2,5 - 10 µg/ml. Sementara 4 isolat (40%) dinyatakan resisten terhadap tetrasiklin, dengan rentang KHM ≥ 20 µg/ml.

Kesimpulan : Tingkat kepekaan *Mycobacterium non tuberculosis* memberikan hasil *intermediate* hingga resisten, dan tidak terdapat hasil sensitif terhadap tetrasiklin. Hal ini menginterpretasikan bahwa tetrasiklin memerlukan dosis yang lebih tinggi untuk melawan pertumbuhan Mycobacterium non tuberculosis.

Kata Kunci : Uji potensi antibiotik, tetrasiklin, Mycobacterium non tuberculosis, Konsentrasi Hambat Minimal (KHM), *in vitro*.

ABSTRACT

Background: The prevalence of infection with Nontuberculous Mycobacterium in some countries have increased. The difficulty of the selection of antibiotics caused by bacterial resistance to Mycobacterium tuberculosis first line therapies. The differences in the susceptibility pattern of the bacteria against antibiotics, encourage clinicians to do the Antibiotic Susceptibility Test.

Objective: To find out how the sensitivity level of rapidly growing mycobacterium against tetracycline with in vitro method.

Methods: This study was a descriptive observational design method through the utilization of macrobroth dilution test, using 10 isolates rapidly growing mycobacterium tested with tetracycline by in vitro. This experiment was performed in the Laboratory of Microbiology, Faculty of Medicine, Gadjah Mada University.

Results: From 10 isolates of Nontuberculous Mycobacterium, there are 6 isolates (60%) gave intermediate results to tetracycline with MIC's range 2,5 - 10 µg/ml . While the other 4 isolates (40%) was found to be resistant to tetracycline with MIC's range ≥ 20 µg/ml.

Conclusion: The sensitivity level of Nontuberculous Mycobacterium provide intermediate results to be resistant, and there are no sensitive results against tetracycline. It is interpreted that the tetracycline require higher dosage to inhibit the growth of Nontuberculous Mycobacterium.

Keywords: Antibiotic Susceptibility Test, Tetracycline, Nontuberculous Mycobacterium, Minimum Inhibitory Concentration (MIC), In vitro.