

## ABSTRAK

# UJI RESISTENSI BAKTERI *Pseudomonas aeruginosa* PADA *BOWL RINSE DENTAL UNIT* TERHADAP ANTIBIOTIK AMOKSISILIN DAN SIPROFLOKSASIN DI RSGM UNIVERSITAS JENDERAL SOEDIRMAN

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**Latar Belakang.** Infeksi nosokomial merupakan penyakit infeksi terkait pelayanan kesehatan atau HAIs (*Healthcare Associated Infections*). Salah satunya disebabkan oleh bakteri *Pseudomonas aeruginosa*, yang bersumber dari pasien RSGM yang terinfeksi bakteri tersebut. Kemampuan *P. aeruginosa* dalam membentuk biofilm serta penggunaan antibiotik yang kurang tepat, memungkinkan terjadinya resistensi *P. aeruginosa* terhadap antibiotik seperti amoksisilin dan siprofloksasin yang merupakan antibiotik umum digunakan di RSGM Universitas Jenderal Soedirman. **Tujuan.** Tujuan dari penelitian ini adalah untuk mengetahui tingkat resistensi *P. aeruginosa* isolat *bowl rinse dental unit* RSGM Universitas Jenderal Soedirman terhadap amoksisilin dan siprofloksasin. **Metode.** Jenis penelitian ini adalah eksperimental laboratoris secara *in vitro* dengan rancangan *post test only group design*. Sampel penelitian ini terdiri atas 2 strain *P. aeruginosa* isolat *bowl rinse dental unit* hasil penelitian sebelumnya oleh peneliti. Uji konfirmasi yang dilakukan pada isolat tersebut berupa uji morfologi koloni, morfologi sel, uji biokimia, dan uji nutrisi berdasarkan buku *Textbook of Diagnostic Microbiology* dan *Manual Clinical of Microbiology*. Uji resistensi bakteri terhadap antibiotik menggunakan metode Kirby Bauer, dan dianalisis dengan standar parameter *Clinical and Laboratory Standards Institute*. **Hasil dan kesimpulan.** 2 bakteri *P. aeruginosa* isolat *bowl rinse dental unit* masih sensitif terhadap siprofloksasin namun mengalami resisten terhadap amoksisilin.

**Kata Kunci.** Amoksisilin; *Bowl rinse*; Infeksi Nosokomial; *Pseudomonas aeruginosa*; dan Siprofloksasin.

**Kepustakaan.** 54 (2002-2019)

## ABSTRACT

# TEST OF RESISTANCE *Pseudomonas aeruginosa* BACTERIA ON BOWL RINSE DENTAL UNIT AGAINST AMOXICILLIN AND CIPROFLOXACIN ANTIBIOTIKS IN RSGM UNIVERSITAS JENDERAL SOEDIRMAN

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**Background.** Nosocomial infection is an infectious disease related to health services or HAIs (Healthcare Associated Infections). One of them is caused by *Pseudomonas aeruginosa* bacteria. Nosocomial infections can originate from RSGM patients infected with *P. aeruginosa*. The ability of *P. aeruginosa* to form biofilms and inaccurate use of antibiotic, allows the resistance of *P. aeruginosa* to antibiotic such as amoxicillin and cyprofloxacin, which are common antibiotic used at RSGM Universitas Jenderal Soedirman. **Purpose.** The purpose of this research was to determine the level of resistance of *P. aeruginosa* isolates of the bowl rinse dental unit in RSGM Universitas Jenderal Soedirman against amoxicillin and cyprofloxacin. **Methods.** The type of this research was a laboratory experimental in vitro with a post test only group design. The sample of this research consisted of two *P. aeruginosa* bacteria isolates from the bowl rinse dental unit from previous research by researcher. Confirmatory tests carried out on these isolates were colony morphology, cell morphology, biochemical tests, and nutritional tests based on book Textbook of Diagnostic Microbiology and Manual Clinical of Microbiology. The test for bacterial resistance to antibiotic was evaluated using Kirby Bauer method, and was analyzed using standard parameters of the *Clinical and Laboratory Standards Institute*. **Result and conclusion.** The result and conclusion showed that two *P. aeruginosa* isolates from the bowl rinse dental unit were still sensitive to cyprofloxacin but were resistant to amoxicillin.

**Keyword.** Amoxicillin; Bowl rinse; Cyprofloxacin; Nosocomial infection, *Pseudomonas aeruginosa*.

**Bibliography.** 54 (2002-2019)