

ABSTRAK

PERBANDINGAN SENSITIVITAS ANTIBIOTIK AMOKSISILIN DAN SIPROFLOKSASIN TERHADAP BAKTERI *Staphylococcus aureus* PADA PEGANGAN LAMPU DENTAL UNIT DI RSGM UNSOED

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Latar belakang. *Healthcare-Associated Infections* (HAIs) adalah infeksi yang muncul pada pasien yang berada di bawah perawatan medis di rumah sakit dan berkembang selama pasien dirawat di rumah sakit. Permukaan pegangan lampu dental unit berisiko terdapat bakteri patogen HAIs salah satunya *Staphylococcus aureus*. Antibiotik Amoksisilin golongan Beta-Laktam dan antibiotik Siprofloxacin merupakan antibiotik berspektrum luas yang dapat menghambat pertumbuhan bakteri Gram positif maupun Gram negatif. Penggunaan antibiotik secara irasional dalam terapi ataupun profilaksis—adalah faktor utama terjadinya resistensi. **Tujuan.** Penelitian ini bertujuan untuk mengetahui perbandingan sensitivitas antibiotik amoksisilin dan siprofloxacin terhadap bakteri *Staphylococcus aureus* pada pegangan lampu dental unit di RSGM Unsoed. **Metode.** Penelitian ini merupakan penelitian eksperimental laboratoris dengan rancangan *posttest-only control group design* dengan pendekatan *cross sectional*. Uji sensitivitas bakteri dilakukan menggunakan metode *Kirby-Bauer*. Tiga kelompok sampel, yaitu Perlakuan I (amoksisilin), Perlakuan 2 (siprofloxacin), dan Kontrol Negatif (akuades steril) masing-masing sejumlah 9 sampel. Pengukuran diameter zona hambat *Staphylococcus aureus* dan sensitivitas dikategorikan menurut standar CLSI. **Hasil.** Hasil penelitian menunjukkan rerata zona hambat terbesar dihasilkan oleh antibiotik siprofloxacin (25,02 mm) bila dibandingkan dengan amoksisilin (15,94 mm) dan kontrol negatif (0,00 mm). Hasil uji *Kruskal-Wallis* menunjukkan nilai signifikansi sebesar $p=0,000$ yang berarti terdapat perbedaan bermakna dari seluruh kelompok sampel ($p\leq 0,05$). **Simpulan.** Antibiotik siprofloxacin lebih sensitif dibandingkan antibiotik amoksisilin dalam menghambat pertumbuhan bakteri *Staphylococcus aureus* pada pegangan lampu dental unit di RSGM Unsoed.

Kata Kunci : Amoksisilin; Siprofloxacin; *Staphylococcus aureus*; Sensitivitas; Pegangan Lampu.

ABSTRACT

COMPARISON OF ANTIMICROBIAL SENSITIVITY TEST OF *Staphylococcus aureus* FROM DENTAL UNIT LAMP HANDLE IN JENDERAL SOEDIRMAN DENTAL HOSPITAL TO AMOXICILLIN AND CIPROFLOXACIN

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Background. Healthcare-Associated Infections (HAIs) are infections that patients get while receiving medical treatment in hospital or during hospitalization. The surface of the dental unit lamp handle is at risk of having HAIs pathogenic bacteria, one of which is *Staphylococcus aureus*. Beta-Lactam Amoxicillin and Ciprofloxacin antibiotics are broad-spectrum antibiotics that can inhibit the growth of Gram-positive and Gram-negative bacteria. The irrational use of antibiotics in the therapy or prophylaxis is a major factor in the development of antimicrobial resistance. **Purpose.** The purpose of this study was to compare the sensitivity of *Staphylococcus aureus* isolated from dental unit lamp handle in Jenderal Soedirman Dental Hospital to amoxicillin and ciprofloxacin. **Methods.** This research was a laboratory experimental study with a posttest-only control group design with a cross sectional approach. The antimicrobial sensitivity test was conducted using Kirby-Bauer method. Three sample groups, namely treatment 1 (amoxicillin), treatment 2 (ciprofloxacin), and negative control (sterile distilled water) were consisted of 9 samples each. The diameter of inhibition zone was measured and categorized using CLSI standard. **Results.** The results showed the average inhibition zone produced by ciprofloxacin (25.02 mm) was the biggest among two others groups, amoxicillin (15.94 mm) and sterile distilled water (0.00 mm). Statistical analysis using Kruskal-Wallis test showed a p-value = 0,000 which indicating there was a significant mean difference amongs sample groups ($p \leq 0.05$). **Conclusion.** *Staphylococcus aureus* isolated from dental unit lamp handle in Jenderal Soedirman Dental Hospital is more susceptible to ciprofloxacin in comparison to amoxicillin.

Keywords: Amoxicillin; Ciprofloxacin; *Staphylococcus aureus*; Sensitivity; Lamp Handle.