ABSTRAK

KAJIAN LINTAS SEKSIONAL RESISTANSI *Salmonella spp*. DAN *Staphylococcus aureus* TERHADAP *AMPICILLIN* PADA ANJING DI *SHELTER* KABUPATEN SLEMAN

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Salmonella spp. dan *Staphylococcus aureus* merupakan bakteri patogen yang sering ditemukan pada anjing. Bakteri tersebut telah dilaporkan resisten terhadap beberapa antibiotik. Penelitian resistansi antibiotik pada anjing di Kabupaten Sleman belum banyak dilakukan. Tujuan penelitian ini untuk mengetahui tingkat resistansi *Salmonella spp.* dan *Staphylococcus aureus* terhadap antibiotik *ampicillin* serta faktor risiko keberadaan *Salmonella spp.* dan *Staphylococcus spp.*

Penelitian ini menggunakan kajian lintas seksional dengan spesimen swab rektum dari 147 sampel anjing yang berasal dari tiga *shelter* anjing di Kabupaten Sleman. Informasi tentang pemeliharaan anjing di *shelter* didapatkan dengan menggunakan kuesioner berisikan 12 pertanyaan yang berhubungan dengan faktor risiko keberadaan bakteri dan terjadinya resistansi. Isolasi dan identifikasi *Salmonella spp.* menggunakan *Xylose Lysine Deoxycholate* (XLD), *Triple Sugar Iron Agar* (TSIA) dan *Lysin Iron Agar* (LIA). Isolasi dan indentifikasi *Staphylococcus aureus* menggunakan *Mannitol Salt Agar* (MSA), pewarnaan Gram, uji katalase, uji koagulase, uji *Voges-Prokauer*, dan uji gula (manitol). Pengujian sensitivitas *Salmonella spp.* dan *Staphylococcus aureus* terhadap *ampicillin* dilakukan dengan teknik *Kirby-bauer* pada media *Mueller Hinton Agar* (MHA). Analisis data dilakukan secara deskriptif univariat dan bivariat. Analisis data dilakukan secara deskriptif univariat untuk data kuesioner dan bivariat menggunakan *chi-square* untuk asosiasi data informasi individu dan informasi kesehatan dengan keberadaan *Salmonella spp*. dan *Staphylococcus spp.* serta tingkat resistansi *Salmonella spp.* dan *Staphylococcus aureus* terhadap *ampicillin.*

Hasil penelitian ditemukan hasil positif *Salmonella spp.* sebanyak dua isolat dan *Staphylococcus aureus* sebanyak 28 isolat. Pada uji resistansi didapatkan hasil *Salmonella spp.* yang resistansi terhadap *ampicillin* yaitu 50% dan *Staphylococcus aureus* yang resisten terhadap *ampicillin* yaitu 10,7%. Analisis faktor risiko penggunaan antibiotik, riwayat diare, dan asal anjing tidak menunjukkan asosiasi ($p > 0,05$) didalam kejadian resistansi *Salmonella spp* dan *Staphylococcus aureus* terhadap *ampicillin*. Tingkat infeksi *Salmonella spp.* dan *Staphylococcus spp.* pada anjing di *shelter* Sleman berturut-turut yaitu 1,4% dan 19%.

Key words: Anjing, *Ampicillin*, Resistansi, *Salmonella spp.*, *Staphylococcus aureus*

ABSTRACT

CROSS SECTIONAL STUDY OF (*Salmonella spp.*) AND (*Staphylococcus aureus*) RESISTANCE TO *AMPICILLIN* IN DOGS AT A *SHELTER* IN SLEMAN DISTRICT

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Salmonella spp. and *Staphylococcus aureus* are pathogenic bacteria frequently found in dogs. These bacteria have been reported to be resistant to several antibiotics. Studies on antibiotic resistance in dogs in Sleman district are still limited. This research aims to determine the level of resistance of *Salmonella spp.* and *Staphylococcus aureus* to the antibiotic *ampicillin* and the risk factors for the presence of *Salmonella spp*. and *Staphylococcus spp*.

This study employed a cross-sectional design with rectal swab specimens from 147 dog samples from three dog shelters in Sleman Regency. Information about dog care in the shelters was obtained using a questionnaire containing 12 questions related to the risk factors for the presence of bacteria and the occurrence of resistance. Isolation and identification of *Salmonella spp.* were performed using Xylose Lysine Deoxycholate (XLD), Triple Sugar Iron Agar (TSIA), and Lysine Iron Agar (LIA). Isolation and identification of *Staphylococcus aureus* were conducted using Mannitol Salt Agar (MSA), Gram staining, catalase test, coagulase test, Voges-Proskauer test, and sugar (mannitol) test. Sensitivity testing of *Salmonella spp.* and *Staphylococcus aureus* to ampicillin was carried out using the Kirby-Bauer technique on Mueller Hinton Agar (MHA) medium. Data analysis was performed descriptively using univariate and bivariate methods. Univariate descriptive analysis was conducted for the questionnaire data, and bivariate analysis using chi-square was employed to associate individual information and health information with the presence of *Salmonella spp.* and *Staphylococcus spp.* as well as the resistance levels of *Salmonella spp.* and *Staphylococcus aureus* to ampicillin.

The results showed two positive isolates of *Salmonella spp*. and 28 isolates of *Staphylococcus aureus*. Resistance testing revealed that 50% of *Salmonella spp.* were resistant to *ampicillin*, and 10.7% of *Staphylococcus aureus* were resistant to *ampicillin*. Analysis of the risk factors for antibiotic use, history of diarrhea, and origin of the dogs did not show an association ($p > 0.05$) with the occurrence of resistance of *Salmonella spp.* and *Staphylococcus aureus* to *ampicillin*. The infection rates of *Salmonella spp.* and *Staphylococcus spp*. in dogs in the shelters in the Sleman were 1.4% and 19%, respectively.

Key words: Dog, *Ampicillin*, Resistant, *Salmonella spp.*, *Staphylococcus aureus*