INTISARI
UJI RESISTENSI ISOLAT *Escherichia coli* DARI PASIEN KUCING ASAL KLINIK DAN RUMAH SAKIT HEWAN DI DAERAH ISTIMEWA YOGYAKARTA TERHADAP BERBAGAI ANTIBIOTIK

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Escherichia coli (*E. coli*) pathogen dapat menyebabkan diare pada kucing dan beberapa penyakit lain seperti *pyometra*, *septicemia*, dan *Urinary Tract Infection* (UTI). Banyak isolat *E. coli* pada unggas diketahui telah resisten terhadap antibiotik, namun resistensi *E. coli* terhadap antibiotik pada kucing di Daerah Istimewa Yogyakarta belum banyak diketahui. Tujuan penelitian ini untuk mengetahui resistensi bakteri *E. coli* yang diisolasi dari pasien kucing di klinik dan rumah sakit hewan di Daerah Istimewa Yogyakarta terhadap berbagai antibiotik.

Penelitian ini menggunakan 122 isolat bakteri *Escherichia coli* yang dikoleksi dari 188 sampel swab rektal pasien kucing di klinik dan rumah sakit hewan Daerah Istimewa Yogyakarta yang diambil secara *random*. Sampel swab rektal kemudian ditanam pada media *Eosin Methylene Blue* (EMB). *E. coli* yang tumbuh selanjutnya diidentifikasi menggunakan uji biokimia pada *Triple Sugar Iron Agar* (TSIA) dan *Lysine Iron Agar* (LIA). Isolat *E. coli* kemudian ditanam pada media *Mueller-Hinton Agar* (MHA) dan dilakukan uji resistensi terhadap enam jenis antibiotik yaitu *Penicillin G, Ampicillin, Streptomycin, Neomycin, Tetracycline,* dan *Enrofloxacin.*

Hasil pengujian resistensi dari 122 isolat *E. coli* terhadap *Penicillin G* menunjukkan bahwa sebanyak 65 isolat resisten, terhadap *Ampicillin* menunjukkan 42 isolat resisten, terhadap *Streptomycin* menunjukkan 115 isolat resisten, terhadap *Neomycin* menunjukkan 59 isolat resisten, terhadap *Tetracycline* menunjukkan 2 isolat resisten, terhadap *Enrofloxacin* menunjukkan 17 isolat resisten. Ditemukan juga 1 isolat *E. coli* telah resisten terhadap 6 jenis antibiotik, 10 isolat resisten terhadap 5 jenis antibiotik, 21 isolat resisten terhadap 4 jenis antibiotik, dan 39 isolat resisten terhadap 3 jenis antibiotik. Penelitian ini menunjukkan bahwa resistensi *Escherichia coli* terhadap antibiotik dari pasien kucing di klinik dan rumah sakit hewan di wilayah Daerah Istimewa Yogyakarta berturut-turut yaitu *Streptomycin* sebesar 94,3%; *Penicillin G* 53,3%*; Neomycin* 48,4%; *Ampicillin* 34,4%; *Enrofloxacin* 13,9%; dan *Tetracycline* 1,6%. Ditemukan juga beberapa isolat *E. coli* yang multi-resisten antibiotik.

Kata kunci: Resistensi, *Escherichia coli*, kucing, Daerah Istimewa Yogyakarta, antibiotik

ABSTRACT
RESISTANCE TEST OF *Escherichia coli* IN CATS FROM CLINICS AND ANIMAL HOSPITAL IN THE SPECIAL REGION OF YOGYAKARTA AGAINST VARIOUS ANTIBIOTICS

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Escherichia coli (E. coli) pathogens can cause diarrhea in cats and several other diseases such as pyometra, septicemia, and Urinary Tract Infection (UTI). Many isolates of E. coli in poultry have been known to develop antibiotic resistances, however E. coli resistance against antibiotics in cats in the Special Region of Yogyakarta is not well known. The aim of this study is to determine the resistance of E. coli bacteria isolated from cat patients in clinics and animal hospital in the Special Region of Yogyakarta against various antibiotics.

This study utilized 122 bacterial isolates of Escherichia coli collected from 188 rectal swab samples of cat patients in clinics and animal hospital in the Special Region of Yogyakarta, taken randomly. The rectal swab samples were then cultured on Eosin Methylene Blue (EMB). The E. coli that grew were further identified using biochemical tests on Triple Sugar Iron Agar (TSIA) and Lysine Iron Agar (LIA). The E. coli isolates were then cultured on Mueller-Hinton Agar (MHA) media and resistance tests were conducted against six types of antibiotics: Penicillin G, Ampicillin, Streptomycin, Neomycin, Tetracycline, and Enrofloxacin.

The results of resistance test on the 122 E. coli isolates against Penicillin G showed that 65 isolates were resistant, against Ampicillin 42 isolates were resistant, against Streptomycin 115 isolates were resistant, against Neomycin 59 isolates were resistant, against Tetracycline 2 isolates were resistant, against Enrofloxacin 17 isolates were resistant. It was also found that 1 isolate of E. coli was resistant to 6 types of antibiotics, 10 isolates were resistant to 5 types of antibiotics, 21 isolates were resistant to 4 types of antibiotics, and 39 isolates were resistant to 3 types of antibiotics. This study showed that the resistance of Escherichia coli to antibiotics in cat patients in clinics and animal hospital in the Special Region of Yogyakarta was as follows: Streptomycin 94.3%, Penicillin G 53.3%, Neomycin 48.4%, Ampicillin 34.4%, Enrofloxacin 13.9%, and Tetracycline 1.6%. Several E. coli isolates that are multi-resistant to antibiotics were also found.

Keywords: Resistances, Escherichia coli, cats, Special Region of Yogyakarta, antibiotics.