

ABSTRAK

EVALUASI KOMBINASI ENROFLOKSASIN DAN TYLOSIN TERHADAP FUNGSI HEPAR DAN GINJAL BROILER YANG DIINFEKSI *Escherichia coli*

Aurum Wanda Dewana
15/377733/KH/8456

Bakteri *Escherichia coli* menyebabkan kolibasilosis dan dapat mengakibatkan kerugian ekonomi pada industri produksi daging ayam. Antibiotik masih menjadi solusi terbaik penanganan kolibasilosis. Kendala penanganan kolibasilosis adalah terjadinya resistensi antibiotik sehingga membutuhkan antibiotik kombinasi. Penelitian ini bertujuan untuk mengetahui efek enrofloksasin dan tylosin terhadap fungsi organ hati dan ginjal pada ayam broiler yang diinfeksi *E. coli*.

Lima puluh *Day Old Chick* (DOC) digunakan dalam penelitian ini. Ayam broiler dibagi menjadi 5 kelompok yaitu kelompok 1 (ayam kontrol sehat tanpa perlakuan antibiotik), kelompok 2 (ayam kolibasilosis dan antibiotik kombinasi 0,5 gram/2 L air minum), kelompok 3 (ayam kolibasilosis dan antibiotik kombinasi 1 gram/2L air minum), kelompok 4 (kolibasilosis dan antibiotik kombinasi 2 gram/2L air minum), dan kelompok 5 (kontrol sakit tanpa perlakuan antibiotik). Bakteri *E. coli* diinfeksi secara intratrakheal pada hari ke 15. Terapi antibiotik diberikan lewat air minum selama 5 hari mulai hari ke 20. Penimbangan berat badan ayam dilakukan pada hari ke 15 dan 25. Sampel darah dikoleksi melalui vena brakhialis sekaligus dilakukan nekropsi pada hari ke 30. Penilaian makroskopis organ dilakukan secara semikuantitatif. Konsentrasi ALT dan kreatinin dilakukan di Rumah Sakit Hewan (RSH) Prof. Soeparwi Universitas Gadjah Mada. Konsentrasi ALT dianalisis menggunakan *Kruskal Wallis* sedangkan konsentrasi kreatinin dianalisis menggunakan *One Way ANOVA*.

Hasil penelitian menunjukkan dosis antibiotik kombinasi yang efektif adalah dosis 0,5 gram/ 2 liter air minum dan dosis 1 gram/2 liter air minum. Pemberian antibiotik kombinasi enrofloksasin dan tylosin pada ayam yang menderita kolibasilosis tidak berpengaruh signifikan terhadap fungsi hati dan ginjal.

Kata kunci: kolibasilosis, broiler, enrofloksasin, tylosin, ALT, kreatinin

ABSTRACT

EVALUATION OF ENROFLOXACIN AND TYLOSIN TOWARD LIVER AND RENAL FUNCTION OF BROILER WHICH INFECTED BY *Escherichia coli*

Aurum Wanda Dewana
15/377733/KH/8456

Colibacillosis in broiler caused by *Escherichia coli* has an important economic impact on industry of chicken production. Antibiotics are still the best solution for treating colibacillosis. The obstacle in handling colibacillosis is the presence of antibiotic resistance, so it requires treatment with combination of some antibiotics. The aim of this study is to determine the effect of enrofloxacin and tylosin on liver and renal function of *Escherichia coli* infected broiler.

Fifty *Day Old Chick* (DOC) were used in this study. Broilers are divided into 5 groups and labeled into group 1 (healthy control group without applying of antibiotics), group 2 (colibacillosis group with combination antibiotic 0,5 gram/2 L water), group 3 (colibacillosis group with combination antibiotic 1 gram/2 L water), group 4 (colibacillosis group with combination antibiotic 2 gram/2 L water), and group 5 (colibacillosis without applying of antibiotic). *Escherichia coli* are infected intratracheal on the 15th day. Antibiotics are given via drinking water for 5 days started on 20th day. Weight measurement are conducted on 15th dan 25th day. The blood samples were collected via brachial vein and necropsy was conducted on the 30th day. Macroscopic assessment of organs was conducted semiquantitatively. The ALT and creatinine test was conducted at Prof. Soeparwi Animal Hospital, Gadjah Mada University. Alanine aminotransferase concentrations were analyzed using Kruskal Wallis test while creatinine concentrations were analyzed using One Way ANOVA test.

The result shows that the effective dose of combination antibiotics was 0,5 gram/ 2 liters of drinking water and 1 gram/2 liters of drinking water. It can be concluded that the application of the combination antibiotics of enrofloxacin and tylosin in chickens suffering from colibacillosis did not significantly influences the liver and renal function.

Keywords: colibacillosis, broiler, enrofloxacin, tylosin, ALT, creatinine