

## INTI SARI

### **GAMBARAN HISTOPATOLOGI ORGAN HATI DAN GINJAL AYAM YANG DIINFEKSI *Escherichia coli* DENGAN TERAPI TYLOSIN DAN ENROFLOKSASIN**

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Kolibasilosis pada ayam merupakan penyakit yang disebabkan oleh bakteri *Escherichia coli* yang dapat mengakibatkan kerugian ekonomi pada industri produksi daging ayam. Kendala penanganan kolibasilosis dengan terapi antibiotik adalah terjadinya resistensi sehingga membutuhkan antibiotik kombinasi. Penelitian tentang evaluasi produk kombinasi antibiotik tylosin dan enrofloksasin untuk mengetahui pengaruh pemberian kombinasi antibiotik dalam berbagai dosis terapi terhadap perubahan gambaran histopatologi organ hati dan ginjal yang diinfeksi *Escherichia coli*.

Lima puluh ekor ayam broiler umur 20 hari dibagi menjadi 5 kelompok yaitu kelompok tidak diinfeksi *Escherichia coli* (kelompok sehat), kelompok diinfeksi *Escherichia coli* tanpa terapi kombinasi antibiotik tylosin dan enrofloksasin (kelompok sakit), kelompok diinfeksi *Escherichia coli* dengan terapi kombinasi antibiotik tylosin dan enrofloksasin dosis 0,5 gram/2 liter air minum (ECT I), kelompok diinfeksi *Escherichia coli* dengan terapi kombinasi antibiotik tylosin dan enrofloksasin dosis 1 gram/2 liter air minum (ECT II) dan kelompok diinfeksi *Escherichia coli* dengan terapi kombinasi antibiotik tylosin dan enrofloksasin dosis 2 gram/2 liter air minum (ECT III) selama 7 hari. Ayam pada semua kelompok masing-masing diambil sebanyak 3 ekor dan dinekropsi pada hari ke-30. Organ hati dan ginjal difiksasi dengan formalin 10% dan pewarnaan *Hemaktosilin-eosin*. Analisis data secara semikuantitatif.

Hasil pengamatan diketahui terjadi perubahan gambaran histopatologi berupa kongesti dan infiltrasi sel radang pada ginjal kelompok ECT I, ECT II, ECT III, dan kelompok sakit, serta atrofi, kongesti, dan multifokal nekrosis pada organ hati kelompok ECT I, ECT II, ECT III, dan kelompok sakit. Berdasarkan penelitian ini, dapat disimpulkan bahwa ayam yang diinfeksi *E.coli* memiliki perubahan histopatologi ginjal yang paling minimum dengan pemberian terapi antibiotik tylosin dan enrofloksasin dosis 0,5 gram/2 liter air minum, sedangkan perubahan pada histopatologi hati yang paling minimum adalah dengan terapi kombinasi antibiotik tylosin dan enrofloksasin 2 gram/2 liter air minum.

**Kata Kunci:** Kolibasilosis, Enrofloksasin, Tylosin, Hati, Ginjal, Broiler.

**ABSTRACT**

**HISTOPATHOLOGICAL LIVER AND KIDNEY'S CHICKEN  
INFECTED BY *Escherichia coli* WITH TYLOSIN AND  
ENROFLOXACIN THERAPY**

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Colibacillosis in a chicken is a disease caused by *Escherichia coli* has an important economic impact on industry of chicken production. The obstacle in handling colibacillosis with antibiotic as therapy is the presence of resistance, so it requires treatment with combination of some antibiotics. In this research, tylosin and enrofloxacin combination product should be evaluated to determine the effect of various therapeutic doses of antibiotics combination therapy on changes in histopathological of the liver and kidney organs of chicken which infected by *Escherichia coli*.

Fifty broilers age 20 days old are divided into 5 groups and labeled into the group that is not infected by *Escherichia coli* (healthy group), the group that infected by *Escherichia coli* without antibiotic combination of tylosin and enrofloxacin therapy (sick group), the group that infected by *Escherichia coli* using antibiotic combination of tylosin and enrofloxacin therapy in dose of 0.5 gram/2 liters of water (ECT I), the group that infected by *Escherichia coli* using antibiotic combination of tylosin and enrofloxacin therapy in dose of 1 gram/2 liters of water (ECT II) and the group that infected by *Escherichia coli* using antibiotic combination of tylosin and enrofloxacin therapy in dose of 2 grams/2 liters of water (ECT III) for 7 days. Three chickens from each groups were necropsied on the 30<sup>th</sup> day. Liver and kidney were fixed with formaline 10% and *Hematoctilin-eosin* stain. Semiquantitative analyse were used.

Histopathological changes were congesti, and cell inflamation infiltration seen on kidney group ECT I, ECT II, ECT III, and sick group. Atrophy, congesti, and multifocal necrosis seen on liver group ECT I, ECT II, ECT III, and sick group. Based on this research, concluded that chicken which infected by *E. coli* has histopathological on kidney with minimum changes is using antibiotic combination of tylosin and enrofloxacin therapy in dose of 0.5 gram/2 liters of water, and histopathological on liver with minimum changes is using antibiotic combination of tylosin and enrofloxacin therapy in dose of 2 grams/2 liters of water.

**Keywords:** Colibacillosis, Enrofloxacin, Tylosin, Liver, Kidney, Broiler