INTISARI

PERFORMA AYAM BROILER YANG DIINFEKSI BAKTERI *Escherichia coli* DAN DITERAPI ANTIBIOTIK COLISTIN

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Kasus infeksi multiresisten menjadi masalah utama di dunia karena terjadi resistensi terhadap berbagai golongan antibiotik. Kolibasilosis pada ayam adalah penyakit merugikan bagi peternak ayam broiler yang disebabkan oleh salah satu bakteri Gram-negarif yaitu *Escherichia coli*. Colistin atau Polymyxin E adalah antibiotik yang telah digunakan sejak tahun 1959 untuk terapi infeksi bakteri Gram-negatif multiresiten. Tujuan penelitian ini adalah menganalisa performa ayam broiler yang diinfeksi *Escherichia coli* dan diterapi antibiotik colistin.

Penelitian ini menggunakan 16 ekor *Day Old Chicken* (DOC) *Cobb strain* CP 707 yang diproduksi oleh PT. Charoen Pokphand Jaya Farm yang dilakukan selama 21 hari. Ayam broiler dibagi menjadi empat kelompok perlakuan; Kelompok kontrol (K) merupakan ayam yang diinfeksi *Escherichia coli* 10^8 CFU/ml secara intratrakea, Kelompok Colistin 1 (C1) diinfeksi *Escherichia coli* 10^8 CFU/ml dan diberi terapi colistin 0,3 g/Kg ransum, Kelompok Colistin 2 (C2) diinfeksi *Escherichia coli* 10^8 CFU/ml dan diberi terapi colistin 0,6 g/Kg ransum, dan Kelompok Colistin 3 (C3) diinfeksi *Escherichia coli* 10^8 CFU/ml dan diberi terapi colistin 1,2 g/Kg ransum. Perlakuan infeksi *Escherichia coli* dilakukan pada ayam yang berumur 15 hari. Terapi antibiotik colistin diberikan melalui ransum mulai hari ke-17 sampai hari ke-21 pemeliharaan. Analisa performa ayam broiler meliputi konsumsi ransum, konsumsi minum, pertambahan berat badan, konversi ransum, mortalitas dan indeks performa.

Hasil penelitian pemberian terapi antibiotik colistin pada ayam yang diinfeksi *Escherichia coli* menunjukkan perbedaan yang nyata antara kontrol dan kelompok perlakuan ($P<0,05$) terhadap konsumsi minum, pertambahan berat badan dan konversi ransum. Pemberian Colistin pada ayam yang terinfeksi menunjukkan perbaikan konversi ransum dan pertambahan berat badan ayam.

Kata-kata kunci: *Escherichia coli*, *feed conversion ratio*, broiler, Colistin

ABSTRACT

PERFORMANCE OF BROILERS INFECTED BY BACTERIUM *Escherichia coli* AND ADMINISTERED ANTIBIOTIC COLISTIN THERAPY

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Incidence of multidrug-resistant infections have continued to be a major problem in the world as resistance to various classes of antibiotics has happened. Colibacillosis in poultry is an adverse disease for broiler poultry farmers caused by one of the gram-negative bacteria which is *Escherichia coli*. Colistin or Polymyxin E is the antibiotic that has been used since the year of 1959 for the therapy of multidrug-resistant gram-negative bacterial infection. The purpose of this research is to analyse the performance of broilers infected by *Escherichia coli* and were administered colistin therapy.

This research used 16 Cobb strain CP 707 Day-old Chicks produced by Pte Ltd Charoen Pokphand Jaya Farm for 21 days. The broiler were divided into 4 treatment groups; The control group (K) was intratracheally infected by 10^8 CFU/ml *Escherichia coli*, Colistin group 1 (C1) were infected by 10^8 CFU/ml *Escherichia coli* and administered colistin therapy 0,3g/kg of feed, Colistin group 2 (C2) were infected by 10^8 CFU/ml *Escherichia coli* and administered colistin therapy 0,6g/kg of feed, Colistin group 3 (C3) were infected by 10^8 CFU/ml *Escherichia coli* and administered colistin therapy 1,2g/kg of feed. The treatment for *Escherishia coli* infection was done on the 15 day-old chicks. Antibiotic colistin therapy was administered via feed from the 17^{th} to 21^{st} day of care. The performance analysis of broiler chickens includes feed consumption, water consumption, body weight gain feed conversion ratio, mortality and performance index.

The research result of the administration of antibiotic colistin therapy to poultry infected by *Escherichia coli* showed that there is a significant difference between the control and treatment groups ($P<0,05$) towards the feed consumption, water consumption, body weight gain and feed conversion value. The administration of Colistin to the infected poultry showed improved feed conversion rate and animal weight gain.

Key words: *Escherichia coli*, feed conversion ratio, broiler, Colistin