

ABSTRAK

UJI RESISTENSI BAKTERI PADA INTESTINUM EMBRIO AYAM TERHADAP KLORAMFENIKOL DAN AMOKSISILIN

Annisa Putri Utami
18/430036/KH/09757

Penggunaan antibiotik pada ayam sering dilakukan untuk mengobati infeksi bakterial pada ayam. Antibiotik juga ditambahkan pakan dalam dosis sub-terapeutik sebagai *Antibiotik Growth Promoter* (AGP). Kloramfenikol merupakan salah satu antibiotik yang digunakan untuk mengobati infeksi bakteri Gram negatif maupun Gram positif karena sifatnya sebagai antibiotik spektrum luas, namun namun penggunaannya pada ternak konsumsi termasuk ayam telah dilarang berdasarkan Peraturan Menteri Pertanian No.14/Permentan/PK.350/5/2017. Amoksisilin merupakan antibiotik semi sintetis spektrum luas dari golongan penisilin (β -laktam). Penggunaan antibiotik dalam dosis dan jangka waktu yang tidak sesuai dapat menyebabkan resistensi bakteri. Penelitian ini bertujuan untuk mengetahui tingkat resistensi bakteri pada intestinum embrio ayam terhadap kloramfenikol dan amoksisilin.

Telur ayam berembrio (TAB) sebanyak 25 butir berumur 19 hari digunakan sebagai sampel. Embrio ayam dinekropsi, kemudian sampel duodenum, ileum, dan sekum diambil kemudian dikultur pada *Brain Heart Infusion* (BHI). Uji resistensi dengan metode *disk diffusion* terhadap kloramfenikol dan amoksisilin dilakukan terhadap kultur bakteri BHI melalui media *Mueller Hinton Agar* (MHA). Zona inhibisi diukur dan dibandingkan dengan standar zona inhibisi *Enterobacteriaceae* berdasarkan CLSI 2013. Kultur bakteri kemudian ditanam pada *McConkey Agar* (MCA). Data penelitian dianalisis secara deskriptif.

Hasil pengukuran zona inhibisi menunjukkan diameter terhadap kloramfenikol antara 0-38 mm, sedangkan amoksisilin antara 0-40 mm. Berdasarkan kategori, bakteri yang resisten terhadap kloramfenikol sebesar 29,41%, intermediet 5,88%, dan sensitif 64,71%, sedangkan bakteri yang resisten terhadap amoksisilin sebesar 52,94%, intermediet 5,88%, dan sensitif 41,18%. Kesimpulan dari penelitian ini yaitu telah terjadi resistensi bakteri di intestinum sejak dalam embrio ayam sebesar 29,41% terhadap kloramfenikol dan resistensi terhadap amoksisilin sebesar 52,94%.

Kata kunci: intestinum ayam, bakteri, resistensi antibiotik, kloramfenikol, amoksisilin.

ABSTRACT

RESISTANCE TEST OF CHICKEN EMBRYO INTESTINAL TRACT BACTERIA TO CHLORAMPHENICOL AND AMOXICILLIN

Annisa Putri Utami
18/430036/KH/09757

Antibiotics in chickens is often use to treat bacterial infections in chickens. Antibiotics are used as Antibiotic Growth Promoter (AGP) also added to feed in sub-therapeutic doses. Chloramphenicol is one of the antibiotics used to treat Gram-negative and Gram-positive bacterial infections because of its broad-spectrum characteristic however, the use in livestock animal including chicken has been prohibited based on the Regulation of the Minister of Agriculture No.14/Permentan/PK.350/5/2017. Amoxicillin is a broad-spectrum semi-synthetic antibiotic from the penicillin group (β -lactam). The use of antibiotics with abnormal doses and time can cause bacterial resistance. This study aimed to determine the level of resistance of intestinal tract bacteria of chicken embryos to chloramphenicol.

This study used 20 embryonic chicken eggs (ECE) aged 19 days. Chicken embryos were necropsied and the duodenum, ileum, and caecum samples then were cultured on Brain Heart Infusion (BHI). Disk diffusion resistance test method to chloramphenicol and amoxicillin was carried out on BHI trough Mueller Hinton Agar (MHA). The inhibition zones were measured and compared with the standard zone of inhibition of the *Enterobacteriaceae* group from CLSI 2013. Bacterial cultures were grown on McConkey Agar (MCA) for *Enterobacteriaceae* differentiation. The average inhibition zone of bacteria to chloramphenicol then being analyzed descriptively.

The results of measurements of the inhibition zone showed that the diameter for chloramphenicol was between 0-38 mm, while for amoxicillin was between 0-40 mm. Based on the category, bacteria that were 29,41% resistant to chloramphenicol; 5,88% intermediates; and 64,71% sensitive, while bacteria that were 52,94% resistant to amoxicillin, 5,88% intermediates, and 41,18% sensitive. The conclusion of this study is that the intestinal tract chicken embryo bacterial was 29,41% resistance to chloramphenicol and 52,94% resistance to amoxicillin.

Keywords: chicken intestinal tract, bacteria, antibiotic resistance, chloramphenicol, amoxicillin.