

ABSTRAK

INFEKSI BUATAN *Escherichia coli* PADA BURUNG PIPIT (*Lonchura leucogastrides*): PENGAMATAN MIKROSKOPIS PADA ORGAN TRAKEA

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Kolibasilosis merupakan penyakit infeksius pada unggas yang disebabkan oleh *Escherichia coli*, khususnya *Avian Pathogenic Escherichia coli* (APEC), yang menyerang berbagai organ termasuk sistem pernapasan. Infeksi ini berpotensi menimbulkan perubahan makroskopik dan mikroskopik (histopatologi) pada jaringan trakea yang terinfeksi. Penelitian ini bertujuan untuk mendeskripsikan perubahan makroskopik dan histopatologi trakea burung pipit (*Lonchura leucogastrides*) sesudah diinfeksi *Escherichia coli* melalui intranasal. Penelitian ini dilakukan menggunakan kelompok kontrol dan perlakuan, masing-masing tiga ekor. Kelompok perlakuan diinfeksi *E. coli* secara intranasal dengan menggunakan dosis 0,1 ml suspensi BHI berisi 10^8 CFU. Semua burung dieutanasi, dinekropsi dan trakea dibuat histopatologis. Parameter yang diamati antara lain perubahan makroskopis dan perubahan histopatologi menggunakan pewarnaan Hematoksilin-eosin (HE). Hasil penelitian menunjukkan bahwa secara makroskopis tidak ditemukan perubahan. Namun secara histopatologi, ditemukan perubahan berupa kerusakan epitel respirasi, infiltrasi sel radang, desiliasi, dan hiperplasia epitel pada lamina mukosa dan submukosa. Perubahan tersebut menunjukkan adanya respon inflamasi akibat bakteri. Hasil penelitian, dapat disimpulkan bahwa infeksi *Escherichia coli* secara intra nasal pada burung pipit dengan dosis 0,1 ml suspensi BHI berisi 10^8 CFU tidak menimbulkan perubahan makroskopis, namun telah menyebabkan perubahan histopatologis pada jaringan trakea.

Kata kunci : Burung pipit (*Lonchura leucogastrides*), *Escherichia coli*, kolibasilosis, trakea.

ABSTRACT

ARTIFICIAL *Escherichia coli* INFECTION IN SPARROWS (*Lonchura leucogastrides*): MICROSCOPIC OBSERVATION OF THE TRACHEAL ORGAN

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Colibacillosis is an infectious disease in poultry caused by *Escherichia coli*, specifically *Avian Pathogenic Escherichia coli* (APEC), which affects various organs, including the respiratory system. This infection has the potential to cause macroscopic and microscopic (histopathological) changes in infected tracheal tissue. This study aims to describe the macroscopic and histopathological changes in the trachea of white-bellied munia (*Lonchura leucogastrides*) following intranasal infection with *Escherichia coli*. This study was conducted using a control group and a treatment group, each consisting of three animals. The treatment group was infected with *E. coli* intranasally using a dose of 0,1 ml of BHI suspension containing 10^8 CFU. All birds were euthanized, necropsied, and their tracheas were examined histopathologically. The parameters observed included macroscopic changes and histopathological changes using Hematoxylin-eosin (HE) staining. The results of the study showed that no macroscopic changes were observed. However, histopathologically, changes were observed in the form of damage to the respiratory epithelium, inflammatory cell infiltration, desquamation, and epithelial hyperplasia in the mucosal and submucosal layers. These changes indicate the presence of an inflammatory response caused by bacteria. Based on the research results, it can be concluded that intranasal infection with *Escherichia coli* in white-rumped sparrows using a 0,1 ml dose of BHI suspension containing 10^8 CFU did not cause macroscopic changes but did result in histopathological changes in the tracheal tissue.

Keywords: White-rumped sparrow (*Lonchura leucogastrides*), *Escherichia coli*, colibacillosis, trachea.