THE EFFECT OF BLACK SEED (*Nigella sativa* Linn.) EXTRACT ON HISTOPATHOLOGIC OF QUAIL (*Coturnix coturnix japonica*) CAECUM INFECTED BY *Escherichia coli*

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ABSTRACT

This study was aimed to determine the effect of black seed (*Nigella sativa* Linn) extract on histopathologic of quail (*Coturnix coturnix japonica*) caecum infected by *Escherichia coli*. About 30 experimental female quail (day 37 old), were randomly selected and devided into 5 groups. K(-) was given aquadest for 8 days as a negative control. K(+) was infected by 0,5 ml *Escherichia coli* 3,0 x 10⁸ for 3 days as a positive control. P1, P2, P3 were infected by 0,5 ml *Escherichia coli* 3,0 x 10⁸ for 3 days, after that were treated by black seed extract for 5 days (P1= 50%, P2= 75%, P3= 100%). The quail caecum were collected on a day after treatment. Each caecum specimen was processed and the histopathological changes were observed. Score of submucosal edema and epithelial integrity as qualitative data were analyzed with Kruskal Wallis test continued by Mann-Whitney test. Total of PMN infiltration into lamina propria and goblet cell as quantitative data were analyzed with ANOVA test continued by Duncan test. The result were 1) black seed extract was significant in reducing caecum submucosal edema infected by *Escherichia coli*, 2) black seed extract was significant in reducing caecum epithelial integrity infected by *Escherichia coli*, 3) black seed extract was significant in reducing total of PMN infiltration into lamina propria of caecum infected by *Escherichia coli*, 4) black seed extract was significant in increasing total of goblet cell infected by *Escherichia coli*. The effective concentration in this study was 100% of black seed extract.

**Keywords**: *Escherichia coli*, black seed, caecum