

DETERMINATION OF VIRULENCE FACTORS OF *Clostridium perfringens* ISOLATED FROM OSTRICHES

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Summary

We collected 318 fecal samples from ostriches (160 from suspected Necrotic Enteritis and 158 from healthy) and 105 intestinal samples (small intestine, colon, and caecum) for isolation of *C. perfringens*. The results showed that the prevalence of *C. perfringens* in diseased and healthy ostriches was 29.37% (from fecal samples), 34.28% (from small intestinal samples) and 20.88%, respectively. From 423 samples we isolated 116 isolates, the results of biochemical tests showed that all 116 isolates have characteristics as have been documented before. The results of determining toxin types by using Multiplex-PCR proved that all of 116 strains belong to type A. Among 83 *C. perfringens* strains isolated from diseased ostriches 15 (18.07%) strains harbored *NetB* gene, 5 (6.02%) strains carried *Cpb2* gene and 1 (1.2%) strain have *Cpe* gene. The percentage of strain carried genes *NetB* among 64 strains, which isolated from healthy ostriches, was only 3.03% (1/33). When 1-month-old ostriches experimentally infected with *C. perfringens* strain, which was isolated from diseased ostriches, the infected ostriches showed clear symptoms and lesions of the disease.

Keywords: *Clostridium perfringens*, experimental infection, ostriches, toxin genes, Type toxin.