Nucleotide Sequence Analysis of Nucleocapsid Protein Gene of Canine Distemper Virus Isolates in Thailand

Juthatip Keawcharoen

Thesis Advisor(s) : Assoc. Prof. Dr. Kanisak Oraveerakul
Thesis Co-advisor(s) : Prof. Yong Poovorawan

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Abstract

The C-terminal part of nucleocapsid protein gene form 13 canine distemper virus (CDV) isolates in Thailand were analyzed for nucleotide and amino acid sequences. All of the canine distemper virus infected dog histories were recorded for age, clinical findings, pathological lesions, inclusion bodies appearances, evidences of antigen by immunohistochemistry and evidences of CDV-specific RNA by reverse transcriptase polymerase chain reaction. The result revealed that the nucleotide sequences were divided into 2 groups. One exhibited greater homology closely related to vaccine strain (Onderstepoort strain), of total 2 samples, at 99.10% and 97.61% respectively. Another one exhibited greater homology closely related to the other virulent strain reported in GeneBank database (Yanaka, Ueno, Adachi, Hamamatsu and 2544/Han95) and the virulent reference strain (A75/17), of total 11 samples, at 94.63-99.10% at the same position. The deduced amino acid sequences were divided into 2 groups that correlated to the nucleotide sequences. However, there were no association among these CDV groups to their vaccination histories, sex, ages, clinical findings and tissue presentation evidences of viral antigen.

Keywords : Dogs, Canine, Domestic animals, Nucleotide, Canine distemper virus, Nucleocapsid protein gene