Pathology and RT-PCR Employed in the Identification of Canine Distemper Virus Infection in Taiwan

Shiann-Ching WU, Ling-Ling CHUEH, Victor-Fei PANG, Chian-Ren JENG, Chin-Cheng LEE, and Chen-Hsuan LIU

Institute of Veterinary Medicine, National Taiwan University, Taipei, Taiwan 106, ROC

Department of Pathology and Laboratory Medicine, Shin Kong Wu-Ho-Su Memorial Hospital, Taipei, Taiwan 111, ROC

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ABSTRACT Canine distemper (CD) is a highly contagious viral disease, which has been reported in dogs for many years in Taiwan. Ever since 1995, apart from systemic CD, there has been continuous emergence of CD-like demyelinating encephalitis in adult dogs. The goal of this study is to identify CD in Taiwan using pathology and RT-PCR. This report collected 21 cases from animal hospitals throughout the country as well as from the dog pound. The affected dogs died either naturally or by euthanasia. All cases were conducted to perform pathological investigation, ABC immunohistochemistry as well as luxol-fast blue cresyl echt violet (LFB-CEV) histochemistry. Phosphoprotein gene of CD virus (CDV) was used as the target gene for RT-PCR. Under histopathological examination, eight out of 21 cases (38.1%) were diagnosed as CD. With the aid of RT-PCR, 17 cases (81%) were diagnosed as CDV positive. This study also found that 2 cases of demyelinating encephalitis were diagnosed as CDV infection with histopathology, LEB-CEV stain and RT-PCR. On conclusion, systemic and demyelinating CD are identified in Taiwan using RT-PCR along with histopathology. Combination of the two techniques not only raises CD diagnostic rate, but also provides a more rapid, specific, and sensitive method to confirm CDV infection. [Wu SC, Chueh LL, Pang VF, Jeng CR, Lee CC, and Liu CH, Pathology and RT-PCR employed in the identification of canine distemper virus infection in Taiwan. J Chin Soc Vet Sci 26 (4): 328-338, 2000. *Corresponding author TEL: 02-2363 0231 ext. 2751 ext. 1401, FAX: 02-2363 3289, E-mail: chhsuliu @ccms.ntu.edu.tw]

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