

The Prevalence of canine coronavirus infection in Korea

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Canine coronavirus (CCV) is a cause of sporadic outbreaks of enteritis in dog. Three hundreds and fifty eight fecal samples of dogs with gastroenteritis signs were collected in local veterinary clinics between June, 2003 and September, 2007. Reverse transcriptase polymerase chain reaction (RT-PCR) and nested PCR for M gene of CCV were used to identify CCV from fecal samples. And serum neutralization (SN) test were used to detect CCV titers. CCVs were detected in one hundred and nine (30.4%) samples by RT-PCR and 98 of 249 RT-PCR negative samples were positive by nested PCR. One hundred and five (50.7%) out of 207 CCVs were CCV type I (FCoV-like CCV) and 34 (16.4%) CCVs were CCV type II (typical CCV). Both genotypes were simultaneously detected in 68 (32.9%) CCVs. Epidemiological study on dogs with CCV enteritis revealed such as below: sex distribution of dogs was similar; major clinical signs were watery or hemorrhagic diarrhea (90.5%), vomiting (55.6%), and respiratory signs (23.7%); most of dogs (82.7%) were less than 18 weeks of age; 20.3% of dogs were vaccinated, 18.8% were incompletely vaccinated, and 60.9% were not vaccinated; and in SN test, 81.8% of dogs had titers more than 1:4 which is above the positive level and 18.2% dogs had less than titer 1:4. From the results of this study, it can be concluded that CCV infection is widespread in the Korean dog population and CCV may be attributed to be one of the important agents causing diarrhea in puppies. Possibly, genetic evolution of typical CCV type strain has been anticipated in the sequences of CCVs. Therefore, further studies are required to investigate characterization of recently isolated CCVs in Korea.

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