Vol.25, No. 2(Suppl.) October 2008

PCR based Detection of Helicobacter spp. in Veterinarians, Pets and Their Owners

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Purpose: we report Helicobacter spp. infection showed the zoonotic potential in veterinarians, pet animals including dogs and cat, and their owners by using the PCR assay.

Materials and Methods: Saliva and feces samples from 43 veterinarians, 38 dogs, 1 cat, 40 dogs and cat owners, and 39 peoples living without animals were attained. Each DNA samples extracted from each samples were evaluated by Helicobacter genus-specific nested PCR and the positive samples were conducted to Helicobacter-species specific PCR for H. felis, H. bizzozeronii, H. pylori.

Results: On Helicobacter genus-specific nested PCR, 83.7% of the veterinarians (36 of 43), 72.5% of the owners (29 of 40), 87.2% of the pet animals (34 of 39) and 79.5% of the non-owners (31 of 39) were positive on either saliva or feces samples. The results of Helicobacter species-specific PCR on positive samples revealed that 8.3% of the veterinarians (3 of 36), 3.4% of the owners (1 of 29), 8.8% of the pet animals (3 of 34) and 3.2% of the non-owners (1 of 31) were positive for H. bizzozeronii specific PCR. 77.8% of the veterinarians (28 of 36), 58.6% of the owners (17 of 29), 11.8% of the pet animals (4 of 34) and 19.4% of the non-owners (6 of 31) were positive for H. pylori specific nested PCR and all samples were negative for H. felis specific PCR.

Conclusion: The study show that some animal sourced Helicobacter spp. infections may be presented in human and it should be considered zoonosis.

Acknowledgements

This work was supported by the Brain Korea 21 program and Korean Research Foundation Grant (KRF-2006-005-J02902)

Key words: Helicobacter spp., PCR, dog, cat, veterinarian

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