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GASTROINTESTINAL PARASITES IN DANISH CATS

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Introduction

Gastrointestinal parasites, including protozoa, are known to cause diarrhea in animals and humans. The objective of this study was to investigate the prevalence and genetic variation of *Cryptosporidium* spp., *Giardia* spp. in cats from Zealand and to study possible risk factors associated with these infections.

Materials and Methods

Faecal samples and questionnaire data were collected from a total of 315 cats including 284 cats from 2 veterinary clinics and 2 shelters (study population), and 34 cats from 3 catteries (cases). Cysts and oocysts were quantified by immunofluorescence microscopy (IFA), and all samples positive by IFA underwent PCR amplification and sequencing of the 18S rDNA, *hsp70* and *gdh* genes.

Results

Within the study population (n=284) the prevalence of *Giardia* and *Cryptosporidium* was 7.0% (n=20) and 6.7% (n=19), respectively. Eight of the cats were infected with both parasites (2.8 %). The prevalence among cats (n=34) in catteries was 47.1 % (n=16) for *Giardia* and 35.3 % (n=12) for *Cryptosporidium*. Nine of the cats were infected with both parasites (26.5 %). Significant risk factors associated with *Cryptosporidium* spp. infection were: *Giardia* spp. infection (study population), age (cases) and “cause for the veterinary consultation” (cases). Risk factors significantly associated with *Giardia* spp. infection were: *Cryptosporidium* spp. infection (cases), outdoor access (study population) and “other animals in the household” (study population). A significant positive association between level of (oo-)cyst excretion and clinical illness/diarrhea was found. Catteries had significantly more *Giardia* and *Cryptosporidium* infected cats compared to veterinary clinics and shelters. Molecular analyses of *Giardia* isolates revealed predominantly *Giardia duodenalis* assemblage F, but *Giardia duodenalis* assemblage A was also detected, whereas all *Cryptosporidium* isolates were identified as *Cryptosporidium felis*.

Conclusion

Infections with *Cryptosporidium* and *Giardia* represent a real problem among cats and especially in catteries where it, despite treatment and hygiene measures, can be difficult to control these infections. *C. felis* and *G. duodenalis* Assemblage A are capable of infecting humans, and close contact with cats is a potential source of infection, although the risk is currently considered to be low.