Feline Giardia & Coccidia: Risk & Prevalence

Previous studies of protozoa in cats in the U.S. have found fecal prevalence of 2.4% to 7.3% for Giardia species, 2.9% to 6.7% for coccidia, and 2.4% to 5.4% for Cryptosporidium species. In this study, the medical records of pet cats receiving primary health care at Banfield Hospitals in 40 U.S. states from 2003 to 2004 were reviewed. Prevalence and risk factors for coccidia and Giardia infections were estimated from records of 631,021 cats that made 1,456,712 office visits and had 211,105 fecal examinations. Overall fecal prevalence of Giardia species (0.58%) and coccidia (1.4%) was lower than in previous reports for domestic and shelter cats. The differences may be due to the source and geographic location of the cats, age variation, health status, or fecal examination techniques. Fecal examinations were performed by using zinc flotation, direct smear, or a combination, although the exact number of samples that were examined in a particular way could not be determined from the records. Also, had centrifugation and more sensitive tests (eg, enzyme-linked immunosorbent assay for Giardia, immunofluorescence assay or fluorescent antibody for Cryptosporidium, IgM or IgG serology for Toxoplasma) been used, prevalence estimates would probably have been higher. As in previous reports, cats under 4 years of age were at increased risk for Giardia and coccidia infections. Other risk factors for coccidia infection included intact status and season (spring, summer, and fall). Giardia infections were more prevalent in fall and winter. Risk for Giardia infection was increased in purebred cats compared with mixed breeds, but no significant difference existed for coccidia infections. There was a geographic difference in fecal prevalence: Giardia species were more common in the Mountain region (MT, ID, WY, CO, NM, AZ, UT, and NV) and coccidia in the West and East South Central regions (AR, LA, OK, TX, KY, TN, AL, and MS).

COMMENTARY: The ability to draw from such a large database of medical records of “cared for pets” makes studies such as this invaluable. Although this study showed that pet cats are not as likely to have Giardia or coccidia infections as pets in shelters, the risk is still present. The Companion Animal Parasite Council recommends that cats less than a year of age receive 2 to 4 fecal examinations during their first year of life; then 1 to 2 times per year thereafter. This study confirms the importance of the fecal exam and reminds us that as veterinarians we have the responsibility to counsel pet owners on the risk of zoonotic diseases.—Patricia Thomblison, DVM, MS


Good Food, Bad Reactions

Adverse food reactions are divided into 2 categories: immunologic and nonimmunologic reactions. Food allergy (FA) implies a true immunologic response while food intolerance (FI) includes idiosyncratic, toxic, anaphylactic, pharmacologic, and metabolic food reactions as well as food poisoning. Overlap among types is possible, and distinguishing among them may be difficult. Although all proteins have the potential to be antigenic, not all proteins in a food are allergenic. It is unclear which proteins are the most important allergens in dogs and cats. Allergenicity can be influenced by food processing. It appears that allergenicity of most food is either unchanged or reduced by cooking or partial digestion. The exception is Maillard reactant products that are formed when proteins are cooked with carbohydrates—these products can increase or decrease the allergenicity of the proteins. A reliable diagnosis of FA can only be made with dietary elimination trials, and provocative testing will identify the component to which the animal is allergic. It often takes several weeks of feeding the elimination food—some report that it may take as long as 13 weeks—before an improvement is noted. The response may be quicker for some patients. Response to diet may be complicated by partial or accidental response, the influence of infections (bacterial and fungal), and simultaneous treatment for pruritus. Some owners will not allow a challenge test, but only a challenge test can definitively diagnose FA. The best treatment for FA is avoidance of the offending food allergen. Homemade recipes, commercial novel protein diets, and hydrolyzed protein diets can be used. Some animals become allergic to the new dietary protein after a period of time; one third of food-allergic humans who strictly avoided the offending food allergens tolerated a new exposure to those allergens in 1 to 2 years. No data are available for dogs or cats.

COMMENTARY: This article provides a good review of food allergy that uses currently recommended terminology; discusses the pathophysiology and prognosis for the disease; and includes treatment and diagnostic guidelines as well as an algorithm.—The Editors