A New Mode of *Toxocara Canis* Transmission?

*Toxocara canis* is the causative agent of both ocular and visceral larva migrans in its paratenic human hosts, representing a serious global public health threat. In addition, toxocariasis is the most common helminth infection in the U.S. The primary mode of transmission in humans is contact with contaminated soil; however, the recent identification of *T* *canis* eggs on dog hair has initiated questions regarding the risk for toxocariasis through direct contact with pet dogs. Several conflicting papers with varying results have recently examined the prevalence of *T* *canis* eggs (both embryonated and nonembryonated) on the hair of dogs. In this study, the rate of contamination in pet dogs was examined. Hair samples were collected from the head, neck, back, and perianal area of 182 animals presented to veterinary clinics, grooming centers, and boarding kennels in Dublin, Ireland. A total of 16 dogs had contaminated haircoats, and 26 eggs were quantified in total (2 nonviable, 23 embryonated, and 1 embryonating). The prevalence of *T* *canis* contamination was 8.8%, and on average 4.24 eggs were identified per gram of hair. There were no significant differences in egg numbers from the head, neck, back, or perianal area samples; older dogs were significantly more likely to carry eggs on their hair than dogs less than 1 year of age. *Study supported by Bayer Animal Health*

**Commentary:** This study suggested that pet dogs whose owners practice proper care and husbandry pose a very low risk for *T* *canis* transmission to human contacts. The dogs in this study were likely treated with prophylactic antiparasite medications and were regularly groomed, contributing to low *T* *canis* prevalence. One point to consider in this study is that dogs with *T* *canis* eggs on their backs may have picked up eggs by rolling in soil and grass. Clinicians may advise concerned pet owners to limit this behavior in public parks to reduce the risk for hair contamination.—Carly Jordan, PhD candidate

Contamination of the hair of owned dogs with the eggs of *Toxocara spp*. Keegan JD, Holland CV. *VET PARASITOL* 173:161-164, 2010.

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**Tapeworms—A Tricky Diagnosis**

Cestode infections in dogs and cats in North America are common, but their incidence may be underestimated because diagnostic techniques for intestinal parasites do not typically identify tapeworm infections. Cestode life cycles are indirect; dogs and cats are commonly definitive hosts and the adult tapeworm is found in the small intestine. Occasionally cats and dogs are infected as intermediate hosts and carry the immature metacestode stages in various tissues. Most tapeworm infections in North America are due to *Dipylidium caninum* (dogs and cats), *Taenia pisiformis* (dogs), and *Taenia taeniaeformis* (cats). It is unusual for infections to result in serious clinical disease; however, there are public health concerns as well as pet owner discomfort from observation of the proglottids. Human infection does occur, primarily in young children, when the intermediate host is accidentally ingested.

*Taenia* species are seen in animals that hunt, as the immature stages occur primarily in rodents. Fleas and lice are the intermediate hosts for *D* *caninum* so infection is fairly common. Infection with *Mesocestoides*, other *Taenia* species, and *Spirometra* are less common, but do occur and can cause life-threatening disease. *Echinococcus multilocularis* and *Echinococcus granulosus* occur in only a small segment of North America, but because these tapeworms can cause serious human disease, control measures are important.

**Commentary:** Few things get pet owners more upset than finding a “moving cucumber seed” or bit of “dried rice” on their pet or even worse on their bed that the pet shares. Usually the proglottid must be damaged to see the tapeworm eggs in a fecal flotation, so it is easy to miss the diagnosis. Checking the feces or the anal area for proglottids (before they have a chance to crawl away) may currently be the best way to make a diagnosis. Although they may not create a huge clinical problem for most pets, the potential is there. Zoonotic risks need to be addressed and flea prevention is important in controlling *D* *caninum* infections.—Patricia Thomblison, DVM, MS


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