Heartworm Exposure in Cats

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In the Literature

Lin CH, Lo PY, Tsai HJ, et al. *Dirofilaria immitis* exposure status in client-owned cats with or without lower airway/lung-associated signs: case-control study in a canine heartworm-endemic area. *J Feline Med Surg*. 2017;19(2):153-157.

FROM THE PAGE ...

Heartworm infestation is thought to be uncommon in cats, which are more resistant than dogs to development of significant heartworm burdens. However, cats can develop clinical signs following *Dirofilaria immitis* exposure, even if there are no adult heartworms in the heart and lungs. Heartworm-associated respiratory disease (HARD) has been described in cats that developed lower airway signs (eg, coughing, labored breathing, tachypnea) following exposure to heartworms, including immature heartworms.

This prospective study aimed to evaluate frequency of HARD development in cats in a heartworm-endemic area and to investigate whether cats presented with lower airway/lung (LA/L) clinical signs were more likely to test positive for heartworm exposure.

The study included 83 owned cats that were presented with LA/L clinical signs to 5 clinics in Taipei, Taiwan, a heartworm-endemic area. Owned cats ($n = 103$) with no LA/L clinical signs comprised the control group. Cats less than 6 months of age and/or cats that had received heartworm preventive medications in the previous 6 months were excluded. Serum or plasma samples were tested for circulating IgG *D immitis* antibodies. Samples from free-roaming cats ($n = 40$) were evaluated for *D immitis* antibodies to assess seroprevalence in stray cats in Taiwan.

Overall, cats that were presented with LA/L clinical signs did not have a significantly higher *D immitis* exposure rate; there was no significant difference in percentage of seropositive subjects between the 2 groups of owned cats. In addition, there was no significant difference in the percentage of free-roaming cats that tested positive for *D immitis* exposure as compared with owned cats.

Seropositive cats were 1.814 times more likely to have LA/L clinical signs as compared with unexposed cats. Cats with outdoor access were significantly more likely to be seropositive for *D immitis* exposure as compared with indoor-only cats. However, indoor cats were not completely protected from exposure; some had circulating *D immitis* antibodies.

... TO YOUR PATIENTS

Key pearls to put into practice:

1. HARD can occur in cats in the absence of adult heartworms and is characterized by labored breathing, coughing, and tachypnea.
2. Cats that are presented with LA/L signs should be tested for heartworm disease. Ideally, both an antigen and antibody test should be performed.
3. All cats (ie, indoor and outdoor), particularly in endemic areas, should be treated with monthly heartworm preventives.

Suggested Reading

Lee AC, Atkins CE. Understanding feline heartworm infection: disease, diagnosis, and treatment. *Top Companion Anim Med*. 2010;25(4):224-230.