Heartworm preventives are highly effective in protecting against heartworm infections, but success can be impaired by owners' inability to administer these medications in a timely and consistent manner. Not every lapse in preventive adherence, however, carries the same level of exposure risk, nor do the same set of diagnostic recommendations or client education considerations apply to every situation.

How would you handle the following cases?

Case 1: Mrs. Larson has brought in 4-year-old Sam, an indoor/outdoor domestic short-haired cat, because of a chronic cough, vomiting, and appetite loss. Mrs. Larson admits she stopped giving Sam his topical heartworm preventive a year earlier because she thought it was "too expensive." Sam has never been tested for heartworms.

Q. What would you do first in this situation?

- a. Prescribe an antibiotic for the cough and recheck in 10 days.
- b. Perform radiographs, baseline bloodwork, and both antigen and antibody tests for heartworm. If the antigen test is negative but the antibody test is positive, repeat the antigen test in 1 to 2 months.
- c. Immediately order echocardiography.
- d. Immediately scold Mrs. Larson for being so irresponsible.

A. The correct answer is b.

Sam's clinical signs, together with a history of noncompliance, suggest that he could have an adult heartworm infection. Both heartworm antigen (AG) and antibody (AB) tests are recommended for cats with suspected heartworm infection. Why? Cats typically have very low heartworm burdens. Immature infections and male-only infections may be undetectable on AG tests. AB tests detect the presence of past and present infections, male or female, as early as 2 months' after infection. If Sam was recently infected, he may test AG-positive in a matter of months—but later than the antibody test.

Explain to your client that heartworms cannot be treated in cats, only prevented, and recommend that Sam be put back on preventive year-round. Also discuss the added value of intestinal parasite prevention with the same medication and that Sam's indoor/outdoor lifestyle puts him and the family at increased risk of infection with these zoonotic worms.

Case 2: The Jones family recently moved to your community from Michigan and this is their first visit. Winston, a 5-year-old male Boston terrier, has been on a seasonal heartworm prevention program that entailed giving a topical monthly preventive from March through September and skipping prevention October through February. Winston's last heartworm test was one year ago. A normally active and healthy dog, Mrs. Jones mentions that he has been a little less energetic for several months. You immediately test Winston for heartworms using the antigen and microfilariae (MF) tests. Fortunately, both tests are negative.

Q. What should you tell Mrs. Jones to educate her about heartworm prevention for Winston?

- a. Recommend that Mrs. Jones switch Winston to year-round prevention, staying with the same broad-spectrum preventive.
- b. Explain that heartworm preventives work retroactively by killing heartworms that had infected the dog for the previous 30 days—and that stopping Winston's preventive in the fall puts him at risk from heartworms he could have acquired earlier.
- c. Emphasize the difficulty of predicting "safe" months, especially since we know that mosquitoes can survive the winter in "microclimates" inside homes, garages, and other protected areas.
- d. Discuss that heartworm prevention not only protects Winston from heartworms, but can also protect both Winston and Mrs. Jones' family from potentially zoonotic internal and external parasites.
- e. All of the above.

A. The correct answer is e.

Lapses in heartworm preventive administration are a fact of life in veterinary practice. When a patient's history indicates such a lapse, understanding when to test, which tests to run, and what recommendations to give clients moving forward can help ensure that heartworm-positive patients are diagnosed and managed in a timely fashion.

For more on heartworm prevention and diagnostic testing in dogs and cats, check out the American Heartworm Society's Current Canine Guidelines and Current Feline Guidelines.

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PROTECT YOUR PET 12 MONTHS A YEAR. TEST YOUR PET EVERY 12 MONTHS.