

Ask A Vet: Puppy Protozoa Problems

Sunday, August 23, 2015

Dear Dr. Weldy's,

I took my new puppy to the vet the other day and during the exam they took a stool sample and tested it. It turned out to have coccidia. They said it does not respond to traditional wormers. Can you explain the difference and how my new puppy got this?

Dear Reader,

Coccidia are protozoa (one celled organisms) found to cause an infection in the gut or intestinal tract. They are not worms but because they live in the intestinal lining of the gut and cause diarrhea they get mistaken for intestinal worms. Most coccidia for dogs and cats are found to be in the genus *Isospora*. There has been found at least six different genera in dogs. The dog that is infected with coccidia will pass oocysts (immature coccidia) in the feces. They are very resistant to a wide range of conditions in the environment and will survive in the soil for a long time. With the right type of temperature and humidity, the oocysts will then "sporulate" and have the ability to become infective. When an unsuspecting dog swallows these "sporulated oocysts" the oocysts will then release "sporozoites" that set up house in the intestinal lining inside cells and further infect surrounding cells. Dogs and cats can become infected also by eating a mouse infected with coccidia.

The whole cycle of getting infected can occur in as much as six hours but realistically takes seven to ten days. Generally, young kittens and puppies can be exposed right after birth via the mother's feces. If the mother is shedding the oocysts at that time, they can become infected during nursing. Because the immune system of the young is so immature, the young animals are at risk of contracting these organisms and cause serious health issues. Most young animals do contract this from the mother, however, any animal exposed to others at a shelter, kennel, breeding facility, dog parks, or where other animals can congregate, are at risk of becoming infected. Most common coccidia found in dogs and cats do not infect humans. Less common coccidia called *Cryptosporidium* can be transmitted to humans. Good hygiene and proper disposal of feces will make this an absolute non-issue.

Not all animals infected with coccidia will show clinical signs. Signs include mild to severe watery diarrhea, signs of dehydration (tenting skin), and sensitive stomachs with or without vomiting. Diagnosis is done on an examination under the microscope of the stool sample. They are small and sometimes hard to find on examination if the oocysts are not shedding at the time the stool sample was collected. The most common treatment for coccidia is a sulfa-class type antibiotic for seven to fourteen days given orally. Fluids and other supportive care may be given if dehydration is suspected. Generally, treatment is repeated in two to three weeks and thorough cleaning and disinfecting of premises should be done to minimize reinfestation. Unfortunately, combining coccidia with common roundworm infestation will make symptoms worse. Good news is all is treatable.

-Dr. Wanda Schmeltz

