Pet Medical Center
525 South State Street
Orem UT 84058
801-225-5395

Giardiasis

Anisa D. Dunham, AS, RVT
Lynn F. Guptill, DVM, PhD, DACVIM (Small Animal)

BASIC INFORMATION

Description

Giardiasis is an acute or chronic gastrointestinal (GI) tract disease. It is characterized by diarrhea and weight loss in both dogs and cats.

Causes

Giardiasis is caused by the one-celled, protozoan parasite *Giardia duodenalis.* At least seven genetic groups (called *assemblages*) of *Giardia* may infect dogs and cats. Some of these genetic groups can also infect humans, whereas others infect only dogs and cats.

Giardia is found throughout the world. Transmission is via the fecal-oral route, which means that the cyst form of the parasite is swallowed in food and water contaminated with feces. Cysts enter the small intestines, where they mature into trophozoites (the active feeding stage of the parasite). Both cysts and trophozoites are passed in the feces.

Clinical Signs

Most animals infected with *Giardia* are asymptomatic. When signs are present, the most common one is an acute, self-limited, small-bowel diarrhea that results in the passage of large volumes of watery feces. Intermittent or chronic diarrhea, weight loss, decreased appetite, and vomiting occur less often. Rarely, acute or chronic large-bowel diarrhea may develop, with increased frequency and straining to defecate and the presence of mucus and red blood in the feces.

Diagnostic Tests

Routine laboratory (blood, fecal) tests are usually recommended to investigate the clinical signs. *Giardia* cysts and trophozoites can be identified in the feces. Samples are commonly collected for 3-5 days, because the parasite is shed intermittently. Special types of fecal tests (such as zinc sulfate flotation with centrifugation) may be done to improve the chance of finding *Giardia* in the feces. A test for *Giardia* antigens (proteins of the parasite) in the feces can also be done. A combination of these tests may be recommended, and additional specialized tests (assays for parasite DNA, intestinal biopsies, and others) may be done in some circumstances.

TREATMENT AND FOLLOW-UP

Treatment Options

Fenbendazole or a combination of febantel and praziquantel (commonly used deworming agents) may be given to dogs and cats once daily for 5 days. Metronidazole (an antibiotic) may also be used in dogs and cats. Although metronidazole is a safe drug, side effects, such as decreased appetite and vomiting, are possible. Neurologic signs may occur with high doses or prolonged use. Animals with *Giardia* are commonly bathed at the beginning and during treatment to remove any parasites from the fur.

The animal's immune response to *Giardia* plays an important role in clearing the infection. Nutritional status of the animal, presence of other GI diseases, coinfection with multiple intestinal protozoans, and virulence (aggressiveness) of the *Giardia* strain also affect the severity of the disease.

Follow-up Care

Treatment failure and reinfections are common because of repeated exposure to the parasite in contaminated environments. The environment should be completely cleared of fecal material. Feces should also be removed from the environment immediately after each defecation. Wash as many areas as possible after removing all organic material, and disinfect the premises with a solution of bleach diluted in water (1:32).

If the environment cannot be completely cleaned (for example, some outdoor kennels), remove the animal from that environment. If the infection does not resolve with appropriate medication, bathing, and environmental control, then our veterinarians may recommend repeating the medication, administering the medication for a longer period of time, or treating the animal with both metronidazole and fenbendazole.

Some drug-resistant strains of *Giardia* exist, but many treatment failures occur because the steps outlined here are not accomplished. Animals should not be allowed to drink from puddles, lakes, streams, or other sources of stagnant water. It may be advisable to treat other animals in the same household while treating the infected, symptomatic pet.

Prognosis

Prognosis is generally good. Sometimes the organism is difficult to completely eliminate, so good husbandry practices are essential for a successful outcome. Older animals, animals with other illnesses, and those with compromised immune systems have an increased risk of complications.

Public Health Information

Some genetic groups of *Giardia* are known to infect humans, so appropriate measures should be taken to avoid contact with feces and other contaminated items. Wear gloves and wash hands thoroughly after handling infected animals or contaminated items.