

Hemorrhagic Gastroenteritis (HGE)

By Jenny Drastura

HGE is a life-threatening disease that can occur in small and medium-sized breeds, but has an excellent cure rate.

Seeing our dogs with bloody diarrhea can give us a real scare. It can be a sign of a minor gastrointestinal upset or the dog swallowing bits of a hard toy. It can also signal a more serious illness.

One of these illnesses is hemorrhagic gastroenteritis (HGE). This type of diarrhea must be distinguished from other types as soon as possible as the disease can be fatal within 24 to 48 hours. Before you become *too* alarmed, the treatment success rate is excellent if the disease is caught early and treated aggressively.

HGE vs. Parvovirus

Canine parvovirus type 2 is usually the first disease that comes to mind when your dog has an acute onset of bloody diarrhea. These patients will also have severe vomiting and dehydration. Parvo is most commonly seen in dogs 3 to 6 months of age. The diagnosis is confirmed using the fecal ELISA test.

Parvo is transmitted by exposure to the feces of an infected dog. Vaccinations are generally effective in preventing the disease. Vaccine failures, of course, can occur.

HGE is *not* contagious. It primarily affects younger dogs, but can occur at any age. Toy and medium-sized dogs appear to be at increased risk.

The disease is characterized by a sudden onset of vomiting, dehydration and profuse bloody diarrhea, often bright red. The diarrhea appears more clotted due to the high presence of red blood cells. It is described in veterinary books as being malodorous and looking “similar to strawberry jam.” (*Sorry readers.*)

The dog often does not act sick in the early stages of HGE. Some dogs have pain in the abdomen, loss of appetite, lethargy or have a fever. As the condition progresses, the dog will eventually go into a state of circulatory collapse – that is, the veins will collapse due to dehydration and loss of fluid from the intestinal tract. *If the disease is untreated, death will come from dehydration, hypothermia and shock.*

Cause

The exact cause of HGE is not known. It most closely resembles acute hemorrhagic enteritis in humans, a disease caused by a strain of the *E. coli* which damages the lining of the large intestine. Other theories include stress, anxiety, intestinal parasites, bacteria, immune-mediated disease, and eating a non-food item or a dramatically different food than usual.

Diagnosis

The first step is to rule out other causes, such as parvovirus (ELISA test) and coagulation disorders. A complete blood count (CBC), biochemical profile, fecal exam, and occasionally abdominal x-rays are obtained to rule out foreign bodies or other diseases.

In HGE, there is a large increase in red blood cells due to the decrease in fluid content of the blood as dehydration progresses. In laboratory terms, the dog’s pack cell volume (PCV) will be high. A PCV of more than 55 is an indication that the blood has thickened. Greater than 70 is a sign of serious illness. The white blood count (WBC) can be high, low or normal.

Treatment

Once HGE is diagnosed, aggressive supportive therapy with fluids is started intravenously to treat the circulatory shock. An antibiotic is administered as well. Food is withheld for 12 to 24 hours, allowing the intestines to rest. Bland food such as chicken and rice or a commercial diet is introduced in small amounts. There is a gradual change to the regular diet unless that diet is thought to be a factor.

Other tests may be given during treatment to monitor electrolytes, renal function, etc.

Fortunately, even in the most seemingly hopeless cases, rapid recovery can occur with the proper treatment. Residual effects are rare. Sometimes the disease will recur, although subsequent cases are not necessarily more serious.

Note: Two of my dogs have had HGE. The dogs were not closely related, and there were 10 years between the cases.

To show you how the symptoms can vary, the first dog vomited undigested food twice in a period of three hours and otherwise seemed fine and bouncy. A few hours later there was a small amount of the clotted diarrhea stuck to her hair, and she was still acting fine. She slowly began to weaken on the way to the vet's office. Her PCV was 60.

The second dog had a huge amount of bloody diarrhea first and one episode of vomiting. She was quiet but not necessarily weak. She also had bloody diarrhea while she was in the hospital. Her recovery was a little slower than the first dog's, though her PCV was lower.

Both were hospitalized for two nights and recovered very nicely. They are small dogs but were slightly older than the usual profile of HGE – both were six years old at the time.

Sources

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