

Gastric Dilatation-Volvulus

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BASIC INFORMATION

Description

Gastric dilatation-volvulus (GDV) is an acute, life-threatening emergency. Gastric dilatation involves the sudden accumulation of gas and fluid in the stomach and is sometimes called *bloat*. Volvulus is the twisting of a bloated stomach so that the openings into and out of the stomach are blocked. As the stomach rotates, it may also cause the spleen to become displaced. GDV causes blood flow to the stomach to be compromised and is often accompanied by shock.

Causes

The exact reason for stomach bloating is unknown. Middle-aged or older, large- and giant-breed dogs are at the highest risk, but GDV can occur in small-breed dogs and cats (rare). The following are considered risk factors for bloat:

- Large- or giant-breed dogs with deep chests and lean body condition
- Dogs with close relatives that have experienced GDV
- Behaviors that promote the swallowing of air
- Stress and nervous temperament
- Feeding large volumes of food at each meal
- Feeding dry foods that contain high quantities of fat or oil
- Conditions that decrease outflow of material from the stomach

Clinical Signs

Restlessness and agitation may be the first signs noted. Affected dogs often pace, are reluctant to lie down, and retch or try to regurgitate; they may have excessive drooling. The abdomen may be noticeably distended and painful. As the duration of GDV increases, the animal may become weak, collapse, and have pale and/or dry gums. Rate and effort of breathing may also be increased.

Diagnostic Tests

A tentative diagnosis may be made by observing a distended, rigid abdomen in a dog of the appropriate age and breed. Certain changes on physical examination may allow your veterinarian to suspect the presence of GDV and shock. X-rays of the abdomen are used to assess the position of the stomach and to confirm the presence of dilatation and/or volvulus. However, x-rays are sometimes delayed until the dog has been stabilized with emergency procedures. Laboratory tests are commonly recommended to evaluate the effect of the GDV on other organs and body chemistries. An electrocardiogram may be indicated if an irregular heartbeat (arrhythmia) is detected.

TREATMENT AND FOLLOW-UP

Treatment Options

GDV is an emergency situation, and therapy is directed at both relieving the distention of the stomach and treating shock. Treatment for shock involves the administration of intravenous fluids and medications. The stomach is decompressed by passing a tube from the mouth into the stomach and evacuating all stomach contents. Decompression may not be possible if the stomach is twisted and the tube cannot be passed. In this instance, needles may be inserted into the stomach through the abdominal wall to release air, or a temporary opening may be made into the stomach through the side of the abdomen. Monitoring of the heart and administration of heart medications may also be started.

Once the animal is stable, surgery is usually performed to assess the health of the stomach; correct any volvulus and return the stomach and spleen to a normal position; remove any irreversibly damaged parts of the stomach and spleen; and permanently attach the stomach to the abdominal wall (gastropexy), so that the stomach cannot twist again in the future. Although some dogs with simple, short-lived bloat may not require surgery, most patients with GDV undergo surgery as soon as shock, heart arrhythmias, and other abnormalities are corrected.

Several surgical gastropexy techniques are available, including the incisional, belt-loop, and tube gastropexies, as well as others. Most of these techniques anchor the stomach wall to the right side of the abdomen.

Follow-up Care

Dogs with GDV require immediate intensive therapy, monitoring, and supportive care; without such care, the condition usually rapidly deteriorates and results in death. GDV can cause biochemical abnormalities, blood pressure problems, heart arrhythmias, secondary infections, damage to the lining and wall of the stomach, alterations in the spleen, and a life-threatening blood-clotting disorder, so laboratory tests and other monitoring procedures are commonly needed.

Postoperatively, intensive therapy is continued for several days. Food and water are usually withheld for 12-24 hours. Exercise is restricted until sutures are removed and the gastropexy site has healed. Your veterinarian may recommend changing the type, amount, and frequency of feedings.

Prognosis

Many dogs recover well, provided the GDV is diagnosed and treated quickly. Prognosis is poorest for animals with severe damage and perforation of the stomach and those with serious secondary infections (sepsis, peritonitis) or heart arrhythmias.