

Long-Term (Chronic) Vomiting

Basics

OVERVIEW

- “Vomiting” is the forceful ejection of stomach contents up through the mouth
- “Chronic” is an adjective used in medical writing to indicate a prolonged onset and long course of a disease or medical condition
- Long-term (chronic) vomiting is defined as persistent vomiting lasting longer than 5–7 days or vomiting that occurs intermittently several days per week and is not responsive to medical treatment designed to control vomiting (known as “symptomatic treatment”)
- The gastrointestinal tract includes the stomach, small intestines, and large intestines (known as the “colon”)

SIGNALMENT/DESCRIPTION OF PET

Species

- Dogs
- Cats

Breed Predispositions

- Confirmed or suspected breed predispositions—short-nosed, flat-faced (known as being “brachycephalic”) breeds are prone to blockage of the pylorus (the muscular area where the stomach empties into the upper small intestine; condition known as “pyloric outflow obstruction”) secondary to enlargement of the lining of the gastrointestinal tract (known as “mucosal hypertrophy”); basenjis, German shepherd dogs, and Chinese shar-peis are prone to inflammatory bowel disease (IBD); Rottweilers are prone to development of masses or nodular lesions containing a type of white blood cell (called “eosinophils”) in the digestive tract (condition known as “eosinophilic inflammatory bowel disease”); Airedale terriers are prone to cancer of the pancreas (known as “pancreatic carcinoma”); beagles, Bedlington terriers, cocker spaniels, Doberman pinschers, Labrador retrievers, Skye terriers, and standard poodles are prone to long-term inflammation of the liver (known as “chronic hepatitis”)
- Yorkshire terriers are predisposed to intestinal lymphangiectasia, a condition that results when the lymph draining system from the gut is compromised

Mean Age and Range

- Young pets are more likely to ingest foreign bodies; long foreign bodies like string and thread are more common in cats

SIGNS/OBSERVED CHANGES IN THE PET



- Vomiting of food, clear or yellow-tinged (due to the presence of bile from the upper small intestine) fluid; vomiting blood (known as “hematemesis”); decreased appetite (anorexia); eating of nonfood items (known as “pica”); black, tarry stools (due to the presence of digested blood; condition known as “melena”); increased thirst (known as “polydipsia”); and abdominal distension are typical of diseases involving the stomach
- Diarrhea and profound weight loss are more characteristic of diseases involving the intestines
- Signs such as weakness; increased urination (known as “polyuria”); or yellowish discoloration to the gums and other tissues of the body (known as “jaundice” or “icterus”) relate to other underlying metabolic diseases that may cause long-term (chronic vomiting)
- Weight loss and poor hair coat may indicate long-term (chronic) malnutrition
- Abdominal distention, pain, thickened bowel loops, or masses may be detected during physical examination
- Lymph node enlargement
- “Tacky” or slightly sticky gums and prolonged skin tenting if dehydration is present; pale membranes if the pet has a low red-blood cell count (known as “anemia”)
- Upon oral examination, strings under the tongue or ulcers of the moist membranes of the mouth from excess nitrogen in the bloodstream (known as “uremic ulcerations”) may be found
- When the veterinarian performs rectal examination, diarrhea, blood may be found

CAUSES

Disease of the Esophagus

- The esophagus is the tube running from the throat to the stomach
- Hiatal hernia (more commonly see regurgitation)
- Backward or reverse flow of stomach contents into the esophagus (known as “gastroesophageal reflux”); (more commonly see regurgitation); may have inflammation of the esophagus (known as “esophagitis”)

Infectious Disease

- *Helicobacter*-related inflammation of the stomach (known as “gastritis”)
- Histoplasmosis, a disease caused by *Histoplasma* (a deep fungal infection)
- *Pythium*, a water mold that causes pythiosis
- Small intestinal bacterial overgrowth (SIBO)
- Stomach parasites—*Physaloptera*
- Intestinal parasitism

Metabolic Diseases

- Kidney disease
- Disease of the liver and/or bile system (known as “hepatobiliary disease”)
- Inadequate production of steroids by the adrenal gland (known as “hypoadrenocorticism” or “Addison's disease”)
- Long-term (chronic) inflammation of the pancreas (pancreatitis)
- Condition in which levels of acid are increased in the blood due to the presence of ketone bodies secondary to diabetes (known as “diabetic ketoacidosis”)
- Metabolic acidosis (a condition in which levels of acid are increased in the blood)
- Electrolyte abnormalities—decreased levels of potassium in the blood (known as “hypokalemia”); increased levels of potassium in the blood (known as “hyperkalemia”); decreased levels of sodium in the blood (known as “hyponatremia”); and increased levels of calcium in the blood (known as “hypercalcemia”)

Inflammatory Bowel Disease

- Inflammation characterized by the type of cells present (such as lymphocytic, plasmacytic, or eosinophilic IBD) or the presence of nodular lesions (known as “granulomatous IBD”)
- May involve inflammation of the stomach (gastritis), intestines (enteritis), or colon (known as “colitis”)

Obstructive Gastrointestinal Disease

- Foreign body
- Congenital (present at birth) narrowing of the pylorus (the muscular area where the stomach empties into the upper small intestine; condition known as “pyloric stenosis”)

- Long-term (chronic) enlargement of the tissue of the pylorus (the muscular area where the stomach empties into the upper small intestine; condition known as “pyloric hypertrophic gastropathy”)
- Folding of one segment of the intestine into another segment (known as “intussusception”)

Tumors or Cancer

- Tumors or cancer of the gastrointestinal tract: lymphoma, adenocarcinoma, fibrosarcoma, or gastrointestinal stromal cell tumor
- Cancer of the pancreas (pancreatic adenocarcinoma)
- Tumor of the pancreas that produces gastrin, a hormone that causes the stomach to produce hydrochloric acid (HCl); tumor known as a “gastrinoma”
- Generalized (systemic) mastocytosis (condition in which an abnormal number of mast cells are present in multiple tissues; mast cells contain histamine, and if it is released, it stimulates stomach-acid secretion)

Nervous System Disorders

- Fluid buildup in the brain (known as “cerebral edema”)
- Central nervous system (brain, spinal cord) tumors
- Inflammation of the brain (known as “encephalitis”) or inflammation of the brain and its surrounding membranes (known as “meningoencephalitis”)
- Vestibular disease (inner ear problems leading to “dizziness” and nausea)

Motility Disorders

- Following “gastric dilatation-volvulus” or “bloat” (condition in which the stomach dilates with gas and/or fluid [known as “gastric dilatation”], and subsequently rotates around its short axis [known as “volvulus”])
- Following surgical procedures—such as surgery involving the stomach or upper small intestine (duodenum)
- Electrolyte imbalances
- Ileus, a loss of the normal contractions of the gut, leading to pooling of digestive system contents

Miscellaneous

- Drug-induced (such as from nonsteroidal anti-inflammatory drugs [NSAIDs], steroids, chemotherapy drugs, antibiotics, antifungals)
- Food intolerance/allergy
- Toxicity

Additional Causes in Cats

- Parasitic—heartworm disease (known as “dirofilariasis”), *Ollulanus tricuspis*
- Inflammatory—inflammation of the gallbladder (known as “cholecystitis”); inflammation of the bile ducts and liver (known as “cholangiohepatitis”)
- Metabolic—increased levels of thyroid hormone (known as “hyperthyroidism”)
- Functional—constipation/obstipation

RISK FACTORS

- Breed-associated disease (see “Breed Predispositions”)

Treatment

HEALTH CARE

- Specific treatment will be aimed at eliminating the underlying cause in addition to supportive therapy (such as administration of fluids)
- If vomiting persists, the veterinarian will stop oral intake of food and water for 12-24 hours or until medication controls vomiting
- The fluid therapy is used to replace deficits and to provide for maintenance and ongoing losses of body fluids
- Supplement potassium, if low levels of potassium in the blood (hypokalemia) are present
- Blood transfusion in pets with severely low levels of red-blood cells (severe anemia), with evidence of active bleeding into the gastrointestinal tract

DIET

- Debilitated pets and those in poor nutritional condition may need supplemental feeding by feeding tubes or intravenous feeding
- Dietary therapy for pets with suspected food allergy or with inflammatory bowel disease should use a diet containing a single-source protein novel to the pet (that is, feeding a protein to which the pet has never been exposed)

SURGERY

- Use surgical treatment if uncontrolled bleeding, blockage or obstruction, or abnormal opening (known as a “perforation”) of the gastrointestinal tract is identified
- Surgical removal of foreign body or tumor of the gastrointestinal tract

Medications

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered as all inclusive

- Antisecretory drugs, such as H₂-blockers (such as ranitidine, famotidine), or proton-pump inhibitors, such as omeprazole (more potent)
- Protectants (such as sucralfate) to accelerate stomach lining healing; can be used with antisecretory drugs for pets with evidence of upper gastrointestinal bleeding (signs include vomiting blood [hematemesis] or black, tarry stools [melena])
- Antibiotics—indicated for treatment of *Helicobacter*-associated inflammation of the stomach (gastritis), small intestinal bacterial overgrowth (SIBO) syndrome, and as an addition to steroids in the treatment of inflammatory bowel disease
- Suggested treatment of *Helicobacter*-associated inflammation of the stomach (gastritis)—amoxicillin plus omeprazole and metronidazole; clarithromycin can be used with amoxicillin and metronidazole as an alternative therapy for cats
- Metronidazole—may be used in conjunction with steroids to treat inflammatory bowel disease; limited data on effectiveness
- Antibiotic-responsive diarrhea (ARD)—tylosin, in addition to correcting the underlying cause; alternate medication is metronidazole
- Use steroids in conjunction with dietary changes to treat biopsy-confirmed IBD; azathioprine, chlorambucil, or cyclosporine also can be used in pets with poor response to steroids alone or to decrease the dosage of steroids required to control signs
- Drugs that improve the propulsion of contents through the stomach and intestines (known as “gastrointestinal prokinetic agents,” such as metoclopramide, cisapride, or erythromycin) are used to treat delayed stomach emptying not associated with obstructive disease
- Pyrantel pamoate is effective for *Physaloptera*; fenbendazole is effective for *Ollulanus*
- Iron supplementation for pets with long-term (chronic) gastrointestinal bleeding that develop blood-loss anemia
- Surgery and/or chemotherapy for cancer, depending on the tumor type and location
- Excessive production of stomach acid, as occurs with mastocytosis and gastrin-secreting pancreatic tumors, is best treated with antisecretory drugs (such as omeprazole) to diminish inflammation of the stomach (gastritis), stomach ulcer, and long-term (chronic) vomiting
- The veterinarian may elect to reserve drugs to control nausea and vomiting (known as “antiemetics”) for pets with persistent vomiting unresponsive to treatment of the underlying disease (maripontant); other option chlorpromazine
- Vomiting caused by chemotherapy is best treated with ondansetron, given 30 minutes before chemotherapy

Follow-Up Care

POSSIBLE COMPLICATIONS

- Aspiration pneumonia (inflammation of the lungs, caused by accidentally inhaling food, vomit, or liquids)

- Inflammation of the esophagus (the tube running from the throat to the stomach; condition known as “esophagitis”)

Key Points

- Chronic vomiting is persistent vomiting lasting longer than 5–7 days or vomiting that occurs intermittently several days per week and is not responsive to medical treatment designed to control vomiting (known as “symptomatic treatment”)
- Specific treatment should be aimed at eliminating the underlying cause in addition to supportive therapy
- Debilitated pets and those in poor nutritional condition may need supplemental feeding by feeding tubes or intravenous feeding

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