

## Gastroenteritis and Colitis

**Gastroenteritis** is defined as inflammation of the stomach and intestines, while **colitis** is inflammation of the large intestine (colon). Hallmarks of these conditions generally include loss of appetite, vomiting, diarrhea, and secondary dehydration. Numerous conditions cause gastroenteritis and colitis, ranging from mild parasitic infections to dietary indiscretion to severe pancreatitis and other metabolic derangements (Addison's, kidney disease, etc)

**Regurgitation** = passive throwing up of mostly undigested food. Often indicates dysfunction of the upper GI tract (esophagus, upper stomach).

**Vomiting** = active throwing up. Often indicates brain involvement (central emetic zone) or lower GI disease (lower stomach, upper intestine).

**Small bowel diarrhea/enteritis** = large volume watery diarrhea, with possible melena (black tarry stool, coffee grounds). Rarely contains mucus or fresh red blood. -- seen with hookworms, small intestinal bacterial overgrowth (SIBO), Parvovirus, etc.

**Large bowel diarrhea/colitis** = generally mucoid diarrhea with straining. Usually fresh red blood (hematochezia). Seen with whipworms, "suspect constipation", etc.

Localization of the disease helps narrow down the list of differentials. Some conditions only affect one part of the GI tract, while others can affect any or all of the segments. Localization also helps to assess treatment options.

### **Diagnostocs:**

- Bloodwork - to rule out certain metabolic diseases and evaluate level of electrolyte derangements, dehydration, etc.
- Radiographs - to assess for excessive gas and inflammation in the GI tract, ruling out foreign bodies, obstructive lesions, and neoplasia.
- Fecal - to rule out parasites.
- Diarrhea Panel - ELISA to better assess things that don't show up well on fecal - Giardia, Cryptosporidium, viruses.
- Ultrasound - looking for thickening of various levels of the GI tract wall, assessing for inflammation or neoplasia.
- More extensive blood work - TLI, PLI, folate, cobalamin to Texas GI Lab - helps to differentiate conditions like pancreatitis, Exocrine Pancreatic Insufficiency (EPI), SIBO, etc.
- Response to treatment, if acute and not too severe.

**HGE/AHDS - Hemorrhagic Gastroenteritis, Acute Hemorrhagic Diarrhea Syndrome** - recently renamed since vomiting is rarely associated. Sudden development of "raspberry jam" bloody diarrhea with extremely elevated Hct/PCV. In severe cases, rapid thickening of the blood causes extensive intravascular clotting, leading to seizures and death. Fluids are the most important treatment aspect.

**Dietary change** - Think of the intestines like a greenhouse, with bacteria used to a certain food. When the environment changes suddenly, bacteria die off, releasing toxins that cause vomiting and diarrhea. Transitions over 1-2 weeks helps the bacteria acclimate, causing fewer issues.

## **Treatment:**

### Dehydration:

- Subcutaneous fluids - absorb slowly from under the skin, generally doesn't require hospitalization or significant concern with heart disease.
- Intravenous fluids - most direct route of rehydration. Especially useful in cases of HGE/AHDS - acute hemorrhagic diarrhea syndrome - and severe concentration of red blood cells (hemoconcentration). Requires hospitalization.

### Control of vomiting and nausea:

- Ondansetron (Zofran) - for vomiting and nausea.
- Cerenia (maropitant) - for vomiting, may also help with certain types of inflammation and pain. Generally, if still vomiting on Cerenia, check for obstruction.

### Acid control:

- Ranitidine - promotes colonic motility, mildly decreased stomach acid.
- Metoclopramide - promotes intestinal motility, mildly decreased stomach acid. May also help in cases of regurgitation - increased esophageal sphincter tone.
- Omeprazole - significantly decreased stomach acid. Often best for chronic use.

### Diarrhea control:

- Propectalin - tablet or paste. Combination of kaolin-pectin and probiotic.
- Endosorb - tablet - clay supplement. Strongly absorbs water from diarrhea.
- Fortiflora - probiotic powder.
- Metronidazole - antibiotic with mild anti-inflammatory effects. Used especially with bloody diarrhea.
- B12 - some animals, especially cats, seem to respond to B12 supplementation.

### Dewormer:

- If not currently on heartworm medication, we recommend a broad-spectrum dewormer whether the fecal shows eggs/parasites or not, in case of a false negative or inadequate sample.

### Dietary considerations:

- Bland food for several days to allow the GI tract to settle. Hill's i/d, Purina EN, boiled chicken and rice are acceptable options.
- Fiber - slows the GI tract to allow ample absorption of water (thickened diarrhea). Certain fibers also help promote good bacteria through the use of prebiotics.
- Probiotics - flood the GI tract with good bacteria to re-establish normal flora. Alternate with antibiotics for best response.