

## Colitis and Proctitis (Inflammation of the Colon and Rectum)



### Basics

#### OVERVIEW

- “Colitis” is inflammation of the colon
- “Proctitis” is inflammation of the rectum

#### GENETICS

Breed susceptibility to histiocytic ulcerative colitis in boxers; histiocytic ulcerative colitis is inflammation characterized by a thickened lining of the colon with varying degrees of loss of the superficial lining (known as “ulceration”); the thickening is due to infiltration of various cells (histiocytes, plasma cells, and lymphocytes) in the layers under the lining

#### SIGNALMENT/DESCRIPTION OF ANIMAL

##### *Species*

Dogs and cats

##### *Breed Predispositions*

Dogs—boxers for histiocytic ulcerative colitis; histiocytic ulcerative colitis is inflammation characterized by a thickened lining of the colon with varying degrees of loss of the superficial lining (known as “ulceration”); the thickening is due to infiltration of various cells (histiocytes, plasma cells, and lymphocytes) in the layers under the lining

##### *Mean Age and Range*

- Any age
- Boxers usually have clinical signs by 2 years of age

#### SIGNS/OBSERVED CHANGES IN THE ANIMAL

- Feces vary from semi-formed to liquid
- High frequency of defecation, with small volume of stool
- Animals often demonstrate prolonged straining (known as “tenesmus”) after defecation
- Long-term (chronic) diarrhea often with mucus and/or blood; cats may have formed feces with blood (known as “hematochezia”)
- Vomiting in approximately 30% of affected dogs
- Weight loss is rare
- Physical examination usually normal; dogs with histiocytic ulcerative colitis may show signs of weight loss and lack of appetite (known as “anorexia”); histiocytic ulcerative colitis is inflammation characterized by a thickened lining of the colon with varying degrees of loss of the superficial lining (known as “ulceration”); the thickening is due to infiltration of various cells (histiocytes, plasma cells, and lymphocytes) in the layers under the lining

#### CAUSES

- Infectious—parasites (such as whipworms [*Trichuris vulpis*], hookworms [*Ancylostoma caninum*], *Entamoeba histolytica*, *Balantidium coli*, *Giardia*, *Tritrichomonas*, *Cryptosporidium*), bacteria (such as *Salmonella*, *Clostridium*, *Campylobacter*, *Yersinia enterocolitica*, *Escherichia coli*), algae (*Prototheca*), fungus (*Histoplasma capsulatum*), and pythiosis/phycomycosis
- Trauma—foreign body, abrasive material

- Excess levels of urea and other nitrogenous waste products in the blood (known as “uremia” or “azotemia”)
- Segmental—secondary to long-term (chronic) inflammation of the pancreas (known as “pancreatitis”)
- Allergic—dietary protein, possibly bacteria
- Inflammatory/immune disorders—characterized by the type of cells found in the inflamed colon, such as lymphoplasmacytic, eosinophilic, granulomatous, and histiocytic colitis



## Treatment

### HEALTH CARE

- Outpatient medical management, unless diarrhea is severe enough to cause dehydration
- Balanced electrolyte fluids for dehydrated patients

### DIET

- Patients with sudden (acute) inflammation of the colon (colitis) can be fasted for 24 to 48 hours
- Try a hypoallergenic or novel protein (a protein to which the animal has never been exposed) diet in patients with inflammatory colitis; use a commercial or home-prepared diet that contains a protein to which the dog or cat has not been exposed
- Fiber supplementation with poorly fermented fiber (such as bran and  $\alpha$ -cellulose) is recommended to increase fecal bulk, improve colonic muscle contractility, and bind fecal water to produce formed feces
- Some fermentable fiber (such as psyllium or a diet containing beet pulp or fructo-oligosaccharides) may be beneficial—short-chain fatty acids produced by fermentation may help the colon heal and restore normal colonic bacteria

### SURGERY

Segments of colon severely affected by scar tissue (known as “fibrosis”) from long-term (chronic) inflammation and subsequent narrowing (stricture formation) may need surgical removal; folding of one segment of the intestine into another segment (known as “intussusception”) requires surgical intervention; inflammation secondary to the water mold, *Pythium* (disease known as “pythiosis”) or to a particular fungal infection (known as “phycomycosis”) often requires surgical removal or debulking



## 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.

### ANTIPARASITIC OR ANTIMICROBIAL DRUGS

- Whipworms (*Trichuris*), hookworms (*Ancylostoma*), and *Giardia*—fenbendazole (repeat treatment in 3 months)
- *Entamoeba*, *Balantidium*, and *Giardia*—metronidazole
- *Giardia*—albendazole may be an alternative medication to treat *giardiasis*, if fenbendazole or metronidazole is ineffective; monitor for bone-marrow suppression
- *Tritrichomonas foetus*—possibly ronidazole
- *Salmonella*—treatment is controversial because a carrier state can be induced; in patients with generalized (systemic) disease involvement, choose the antibiotic on the basis of bacterial culture and sensitivity testing (antibiotic examples include enrofloxacin, chloramphenicol, or trimethoprim-sulfa)
- *Clostridium*—metronidazole or tylosin

- *Campylobacter*—erythromycin or tylosin
- *Yersinia* and *E. coli*—choose the drug on the basis of bacterial culture and sensitivity testing
- *Prototheca*—no known treatment
- *Histoplasma*—itraconazole; amphotericin B in advanced cases
- Pythiosis/phycomycosis—amphotericin B lipid complex

#### ANTI-INFLAMMATORY AND IMMUNOSUPPRESSIVE DRUGS FOR INFLAMMATORY/IMMUNE COLITIS

- Sulfasalazine; long-term use may be needed
- Steroids—prednisone (taper dosage slowly over 4 to 6 months as directed by your pet's veterinarian, once clinical remission is achieved)
- Azathioprine—a chemotherapeutic drug used to decrease the immune response (dogs)
- Sulfasalazine or other 5-ASA drugs—may be the drugs of choice for plasmacytic lymphocytic colitis (inflammation of the colon characterized by the presence of plasma cells and lymphocytes; plasma cells are specialized white-blood cells; plasma cells are lymphocytes that have been altered to produce immunoglobulin, an immune protein or antibody necessary for fighting disease; a lymphocyte is a type of white-blood cell, formed in lymphatic tissue throughout the body)
- Prednisone and azathioprine are indicated in treatment of eosinophilic colitis (inflammation of the colon characterized by the presence of eosinophils; eosinophils are a type of white-blood cell; they are involved in allergic responses by the body and are active in fighting larvae of parasites) and severe plasmacytic lymphocytic colitis that does not respond to other therapies
- Histiocytic ulcerative colitis in dogs may respond to treatment with enrofloxacin alone or in combination with metronidazole and amoxicillin for 6 weeks; histiocytic ulcerative colitis is inflammation characterized by a thickened lining of the colon with varying degrees of loss of the superficial lining (ulceration); the thickening is due to infiltration of various cells (histiocytes, plasma cells, and lymphocytes) in the layers under the lining

#### MOTILITY MODIFIERS (SYMPTOMATIC RELIEF ONLY)

- Loperamide
- Diphenoxylate
- Propantheline bromide, if colonic spasm is contributing to clinical signs



### Follow-Up Care

#### PATIENT MONITORING

Infrequent recheck examinations or client communication by phone

#### PREVENTIONS AND AVOIDANCE

- Avoid exposure to infectious agents (such as exposure to other dogs, contaminated foods, moist environments)
- Avoid sudden changes in diet

#### POSSIBLE COMPLICATIONS

- Recurrence of signs without treatment, when treatment is tapered, and with progression of disease
- Narrowing of the colon or rectum (stricture formation) due to long-term (chronic) inflammation

#### EXPECTED COURSE AND PROGNOSIS

- Most infections causes—excellent with treatment
- *Infection with Prototheca (type of algae)*—grave; no known treatment except surgical removal of diseased tissue
- *Infection with Histoplasma (type of fungus)*—poor in advanced or widespread (disseminated)

disease; mild to moderate cases generally respond to therapy

- Pythiosis/phycomycosis—guarded to poor; poorly responsive to treatment; some dogs have fair results with surgical removal of affected tissue and treatment with amphotericin B lipid complex
- Traumatic, uremic, and segmental—good, if underlying cause is treatable
- Cecal inversion, ileoceocolic intussusception, and polyps—good with surgical removal
- Inflammatory—good with treatment in patients with lymphoplasmacytic, eosinophilic, and possibly histiocytic disease



## Key Points

- Treatment may be intermittent and long-term in patients with inflammatory/immune colitis, and repeated recurrence is seen in some cases
- Some types of colitis respond poorly to medical treatment; surgery may be necessary