

Irritable Bowel Disease in Dogs

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Inflammatory bowel disease: Why the prognosis is often guarded

Inflammatory bowel disease is the term used to describe a diverse group of intestinal disorders in dogs and cats. These disorders are characterized by the abnormal accumulation of inflammatory cells in the mucosa or lining of the intestine. The most common type of inflammatory bowel disease in dogs and cats is called lymphoplasmacytic enteritis. The reason plasma cells and lymphocytes (cells produced in lymphoid tissue) accumulate in the lining of the intestine is not clear but is thought to involve an immunological reaction to antigens present in food, bacteria, or parasites. Veterinarians diagnose lymphoplasmacytic enteritis by ruling out metabolic, parasitic, infectious, and pancreatic causes of small-bowel disorders and also by obtaining biopsies, which demonstrate the abnormal accumulation of inflammatory cells. The exclusion of known causes of intestinal inflammation such as dietary sensitivity and infestation by internal parasites suggests a diagnosis of idiopathic inflammatory bowel disease. The veterinarian evaluates the degree of cellular accumulation and categorizes this as mild, moderate, or severe. The extent of inflammation varies and can range from the duodenum (the first part of the small intestine) to the rest of the small and large bowel. A very severe form of this disease has been found in Basenjis.

Clinical signs

The most frequently observed clinical signs in dogs and cats with lymphoplasmacytic enteritis are chronic diarrhea (large volume) accompanied by weight loss or vomiting. The pet owner can help the veterinarian diagnose the disease by describing the type of diarrhea. Lymphoplasmacytic enteritis of the small intestine is characterized by small bowel disorder, which involves a large volume of stool, a mild increase in frequency of defecation, and little or no straining, mucus, or blood present. The vomit often contains bile, and in cats it frequently contains hairballs. If the large bowel is involved, there may be mucus, blood, and straining at defecation with little matter produced (tenesmus).

There are other clinical signs such as changes in appetite, excessive burbling noises in the intestine (borborygmi), and abdominal discomfort. It is important for owners to understand that the severity of inflammatory bowel disease is variable, ranging from intermittent diarrhea and vomiting in mild cases to intractable diarrhea, refusal to eat, and weight loss in severe cases. The severity of the disease is believed to reflect the degree of cellular infiltrate into the intestine.

In addition to these signs, the veterinarian may also note a thickening of the intestine (with or without enlarged lymph nodes), marked weight loss, and the accumulation of fluid in the abdomen (ascites). Animals that have very low plasma protein may also show signs of tissue swelling due to edema formation.

Treating the disease: dietary factors

Mild to moderate intestinal inflammation may be associated with dietary sensitivity, food intolerance, parasites (for example, giardia), and even small intestinal bacterial overgrowth. The veterinarian may decide to put the dog or cat on a special diet to determine if dietary sensitivity or intolerance is present. After all factors have been taken into consideration, the pet is usually fed a highly digestible diet that is restricted in fat, is gluten-free, and is limited to a single protein source. Up to six weeks may be required to see a response to this therapeutic trial.

A trial lasting 21 days of antibiotics may be warranted if small intestine bacterial overgrowth is suspected. (Cat owners should know that dietary modification is seldom effective in cats with inflammatory bowel disease and, furthermore, intestinal bacterial overgrowth has not been recorded in cats.) Dietary factors to consider are additives, preservatives, protein digestibility, protein source, and dietary fiber. Some pet foods are labeled hypoallergenic if they contain no additives and preservatives. Although some pets are

allergic to foods with additives and preservatives, there appears to be no hard scientific evidence that most pets react this way, nor is there evidence that additives and preservatives are in and of themselves likely to cause allergic reactions. But weighing in on the side of cautious management, they are excluded from trial diets.

Pet owners should again be reminded that the mere absence of additives and preservatives does not make a food hypoallergenic. Protein digestibility, meaning that the food contains an adequate amount of highly digestible protein; is important because protein that is poorly digestible may cause antigenic stimulation and may promote inflammatory bowel disease. There are no protein sources that are in and of themselves hypoallergenic. This includes lamb. Much depends on the dietary history of the pet. That is, the protein source in the hypoallergenic diet must be a food that the pet has not encountered before, i.e., tofu, cottage cheese, and lamb, along with rice. The owner is usually advised to use only one of the novel protein sources, and if the pet improves, then switch to a commercially available ration with that protein source. An important piece of advice: check the label and avoid rations that list several protein sources. Fortunately, the market offers an increasingly diverse array of novel protein sources, including rabbit, venison, and duck, along with the more familiar lamb, chicken, and rice.

Drug therapy for lymphoplasmacytic enteritis

The administration of immunosuppressives is often required for patients who fail the dietary trials described, for patients with moderate to severe infiltrates, and for patients that develop a condition called hypoproteinemia, a deficiency of protein in the blood due to protein leakage from the gut. Oral prednisone alone is then initial drug of choice. It is usually administered at an immunosuppressive dose for two to three weeks, then decreased by 50 percent every two to three weeks and eventually continued on an alternate day basis for two to three months. The antibiotic tylosin is frequently administered at the same time. If clinical response is poor or if the adverse effects of corticosteroids are troublesome, further immunosuppression can be achieved by adding azathioprine (Imuran) to the regimen. In dogs, azathioprine is usually given every five days and then on a schedule that alternates it with prednisone. Cats are more sensitive to azathioprine and require a reduced dose. The veterinarian will want to monitor the pet's complete blood count every two to four weeks when azathioprine is given. Another drug, metronidazole, can also be used in conjunction with steroids and has effects on bacteria and the immune system.

Successful treatment is accompanied by a decrease in diarrhea and vomiting followed by weight gain and an increase in plasma proteins. Once a patient has had from two to three months of remission of clinical signs it may be possible to gradually withdraw the immunosuppressive therapy. If signs recur, however, daily medication is continued until they resolve, then the medication is gradually reduced. In patients that respond poorly to therapy or go into relapse after an initial response, the veterinarian, may want to reassess* the patient and consider taking additional intestinal biopsies to rule out the presence of alimentary lymphosarcoma, a malignant tumor of the lymphoid tissue.

What's new in drug therapy

There has been progress in developing new drugs to treat inflammatory bowel disease and related problems in humans, but unfortunately few of these new drugs are available or practical for use in dogs and cats. Cyclosporine, the extraordinary immunosuppressant that made organ transplantation a lifesaver for thousands of humans, has had moderate success as a treatment for human bowel disease (in this case, Crohn's disease). The drug has serious side effects and is costly, factors that make its use in pets unlikely. The antihypertensive drug clonidine has been used with success in humans, but there is no report of its use in dogs or cats. Finally, the use of the acid found in fish oil for skin diseases in dogs and cats has led to the speculation that fish oil might also benefit pets with inflammatory bowel disease. Although there is a fish oil drug available for humans with inflammatory bowel disease, the drug has not been evaluated in dogs or cats.

Prognosis

The owner of a dog or cat with lymphoplasmacytic enteritis should understand that the prognosis for recovery depends on the severity of the condition. Prognosis is also quite variable with many patients

requiring prolonged treatment with glucocorticoid and diet modification. In the absence of accurate criteria for predicting response, veterinarians tend to give a guarded prognosis when treating the disease.

Focus on dietary fiber

If you believe all the labels you read, you could come away convinced that fiber in the bowel is absolutely necessary for health, well-being and disease-free longevity. But all the hype aside, can an increase in fiber in the diet of a dog or cat either prevent or help manage inflammatory bowel disease? To begin with, the role of fiber has not been well studied, although some experts believe that an increase in fiber is likely to be useful in some cases. But no one claims that fiber can cure a case of inflammatory disease. Dr. Michael D. Willard of Texas A&M notes that some of the known effects suggest some potential benefits. For example fiber increases the activity of the colon and speeds up transit time, increases fecal output and improves stool consistency. This combined action may be of some benefit in certain cases of bowel disease, as has been reported to happen with human patients. In spite of this evaluation other experts take more guarded approach.

Dr. P. J. Markwell and Dr. I. E. Maskell, both of the highly regarded Waltham Centre for Pet Nutrition in Great Britain, say that high fiber diets are not indicated in gastric diseases. However, they agree that fiber may be beneficial in some cases, mainly for the reasons already given.

Fiber normalizes fecal transit time and fecal water content. Fiber may also increase gastrointestinal tissue weight. The owner of a dog or cat with inflammatory bowel disease is advised not to try to increase fiber content of the pet's diet by, say, giving it a helping of one of the high-fiber breakfast cereals. That's because most commercial breakfast cereals contain only 2 to 4 grams of fiber per cup, and many contain excessive, sugar and gluten. The safest route is to have the veterinarian decide if fiber is of possible benefit in an individual case of inflammatory bowel disease. A homemade high-fiber diet could be prepared by the owner or, a better choice, prescription diet can be such diets are specially formulated with anywhere from 12 to 25 percent more fiber than is in an average commercial food (which usually contains from 1 to 4 percent fiber). In addition prescription diets have the special advantage of being consistent, which is not always the cases with a diet being prepared in the home.