INFLAMMATORY BOWEL DISEASE

About the Diagnosis

**Cause:** The gastrointestinal (GI) tract of dogs and cats is like that of humans: it is a continuous tube made up of the stomach and small intestine (the upper tract) and the large intestine or colon (the lower tract). It functions to store, digest, and absorb food materials and liquids and to produce waste material to be passed out of the body.

Inflammatory bowel disease (IBD) is a group of disorders of the GI system that is characterized by an abnormal accumulation of inflammatory cells (various types of white blood cells) within the walls of the GI tract. As a result of this cellular infiltration within the structure of the stomach and intestine, the movement, digestion, and absorption of food and liquids becomes abnormal and incomplete. Both the upper and lower tracts are commonly affected in dogs, but cats more commonly suffer from IBD involving the upper GI tract. The various forms of IBD are classified by the location within the GI tract and the predominant types of white blood cells that are involved, a determination that is made from a biopsy of the intestinal tissue. Symptoms produced from the disease vary with the form and location of the IBD.

It is important to note that inflammatory bowel disease is a specific form of gastrointestinal disease in which the walls of the stomach and/or intestine are thickened due to the inappropriate infiltration of white blood cells. IBD is a long-standing problem for example, one well-known type of IBD in humans is Crohn's disease. IBD is not a mild, self-resolving irritation of the intestine, such as from indigestion, even though the name "inflammatory bowel disease" might suggest some kind of trivial stomach upset. Rather, IBD is a scientific name based on the characteristic microscopic appearance of affected intestinal tissue on biopsy (the inflammation is at the microscopic level).

IBD is the most common cause of persistent (chronic) vomiting and diarrhea in dogs and cats, meaning vomiting and/or diarrhea that has occurred at least twice per week for months or years. IBD is most often seen in middle-aged animals, but some rare forms occur in dogs and cats that are less than 2 years old. Breeds that may be at an increased risk for the development of IBD include the German shepherd, boxer, rottweiler, Yorkshire terrier, cocker spaniel, shar-pei, soft-coated wheaten terrier, basenji, lundehund, French bulldog, Irish setter, and purebred cats.

The cause of IBD is currently unknown but is most likely multifactorial. This means that several triggers may combine to cause IBD. Factors that are thought to be involved include infections of the GI tract, parasites in the GI tract, dietary factors including allergens, individual genetic susceptibility, drug reactions, and immune system abnormalities.

In cats, IBD has also been associated with inflammatory liver and pancreatic diseases. We also know that in rare cases in cats severe long-standing IBD can progress to lymphosarcoma, a type of cancer of the GI tract.

**Diagnosis:** Symptoms of IBD can vary from patient to patient and are often common to several other diseases. The most common signs of IBD include chronic intermittent vomiting, diarrhea, and weight loss. Some animals will also develop changes in appetite (increase or decrease), sluggishness, increased gas, abdominal pain, straining to pass stool, dark or bloody stools, and mucus-coated stools.

If a suspicion exists for IBD based on your pet's symptoms, your veterinarian will begin by asking you several questions to try to determine if IBD or another type of problem altogether could be responsible for the symptoms. You should provide whatever information you have when you answer these questions, which often include: the type of symptoms observed, the length of time they have been occurring, effects on vital functions such as appetite and fecal elimination (soft, watery, dark, bloody, mucus-like), current diet, recent changes in diet or treats, and any current medications or supplements you are giving your pet. This information can also help your veterinarian differentiate between IBD and other disorders and, furthermore, between upper and lower GI tract IBD.

When examining your pet, your veterinarian will look for some of the changes that can occur with IBD, which may include poor body condition, dehydration, and poor hair coat. When your veterinarian feels the abdomen or belly of your pet, abdominal pain, thickened intestinal loops, and enlarged lymph nodes may be apparent to the vet's fingertips. If IBD is suspected by your veterinarian, further testing will be recommended.

The only way to confirm IBD is to obtain a biopsy of the intestinal tract. As in people, biopsies can be obtained via
endoscopy (a long, flexible tube with a tiny camera on the end is directed into the GI tract through the mouth [upper GI endoscopy] or anus [lower GI endoscopy]), laparoscopy (minimally-invasive surgery in which an instrument with a camera on the end enters the abdomen through a small incision through the body wall), or surgery (an operation allows the surgeon to see the entire intestine inside the abdomen and obtain tissue samples). Samples taken via an endoscope are smaller and do not include all of the layers of the GI tract, but the procedure is minimally invasive. On the other hand, samples taken during a surgical operation can be larger, they include all of the layers, and the full length of the intestine can be seen, but an operation is much more invasive than the scoping types of procedures. Therefore, given the particulars of your pet and your own feelings regarding these advantages and drawbacks, you and your veterinarian should discuss whether a scoping type of procedure or surgery is best for your pet. Note that unlike humans, animals require general anesthesia for scoping procedures (the same anesthesia as for surgery).

Prior to performing any type of biopsy procedure, several other tests will likely be recommended by your veterinarian in order to help support the suspicion of IBD, as well as rule out other medical problems that can have similar symptoms. A fecal test (from a stool sample), complete blood count (CBC) and serum biochemical profile performed on a blood sample, urinalysis (urine test), food trial (switching to a different food or a hypoallergenic diet for several weeks), bacterial cultures, specialized tests to assess the production of digestive enzymes (trypsin-like immunoreactivity), and imaging techniques (x-rays and ultrasound) are some of the more commonly performed tests, and your veterinarian will select among these based on the particulars of your pet’s case.

Living with the Diagnosis

In its most severe forms, IBD is a potentially serious, life-threatening illness. The long-term outlook for recovery (prognosis) varies dramatically with the underlying cause of the disease, the presence of secondary complications, the administration of appropriate medications and treatments, and response to medications. Some cases will completely resolve if treated appropriately, whereas other cases do poorly despite all of the appropriate measures. With a pet that has IBD, it is very important to keep all recommended follow-up appointments and tests with your veterinarian in order to monitor the progression of disease and make any needed medication or treatment adjustments. At home, by monitoring your pet’s weight, as well as changes in appetite, behavior, and frequency of symptoms (vomiting and diarrhea), you will learn helpful information to bring to your next appointment.

It is important to realize that IBD can be a permanent disorder. Some exceptions exist, including IBD caused by parasites or by food allergy, where the trigger can be eliminated and a medication-free, normal asymptomatic lifestyle is the result. Therefore, the tests that are recommended in order to identify any triggers of IBD are extremely important. Without them, a reversible problem may be overlooked, and symptoms could persist needlessly. If no underlying triggers are found, which is often the case, the condition is considered "idiopathic" or "without identifiable cause." In such cases, treatment is symptomatic, meaning that medications are given in order to make an animal feel better and to try to slow the disease process over time (see below).

Give all prescribed medications as directed by your veterinarian. These medications are essential in controlling the disease as well as improving the quality of your pet’s life. Some of these medications may be required for the rest of the pet’s life.

An appropriate diet is essential in the treatment of IBD. Sometimes it is necessary to try several diets, one at a time, to find one that is both palatable (acceptable) and effective at reducing symptoms. You should discuss an ideal diet for your pet with your veterinarian and feed only the recommended foods. If your pet is no longer willing to eat the special diet, contact your veterinarian prior to changing foods. An adequate level of nutrition is extremely important in the well-being of all pets, but especially so for those who have IBD.

If immunosuppressive drugs are being used in your pet's treatment plan, there can be an increased risk for the development of secondary infections. Ask your veterinarian what to watch for and what signs could be indicative of a problem arising.

TREATMENT

The goals of treating an animal with IBD are to minimize the frequency of symptoms (vomiting and diarrhea), find a food source that is well tolerated, maintain a good level of nutrition and body condition, prevent or rapidly identify and treat complications (i.e., esophageal irritation from vomiting, rectal prolapses from straining to pass
stool), and improve the overall quality of the pet's life.

Treatment of IBD must be based on the individual patient, the severity of the symptoms, the underlying cause, and the secondary diseases that may be involved. In every patient, however, all drugs and foods that can precipitate IBD should be identified and removed, and all concurrent or underlying diseases should be diagnosed and treated.

Patients with severe symptoms of IBD will likely need to be hospitalized initially while intravenous (IV) fluids are given to correct dehydration and electrolyte abnormalities and medications are initiated. If hospitalization is not required, your veterinarian will start your pet on medications and treatments that can be given at home.

An appropriate diet is essential in the management of IBD. Depending on your pet's needs, diets that are easy to digest, hypoallergenic, or that have altered fiber contents may be recommended. In most hypoallergenic diets, a highly digestible protein source that the animal has never been exposed to before is the base of the diet (rabbit, venison, whitefish, duck, kangaroo, etc.), and additives and preservatives are avoided as much as possible. Some diets use the theory of hydrolyzed proteins (protein molecules within the diet ingredients are broken down into very small particles), which are thought to be too small for the immune system to recognize and react against. There are a number of veterinary prescription diets available that can be chosen specifically for your pet. Homemade diets can also be used and personalized to your pet's needs with the aid of a veterinary nutritionist, and if you are willing and interested in this approach, you should ask your veterinarian for the contact information of a board-certified veterinary nutritionist (Diplomate of the American College of Veterinary Nutrition).

Note that with all diet trials, it is essential that the chosen diet be the only food source given to your pet during the trial period (usually 6 to 8 weeks). All treats of any kind must be avoided during the trial (including milkbones, rawhides, chew sticks, flavored vitamins and heartworm medications, and foods used to hide medications).

There are several different types of medications available that can help improve or control the symptoms of IBD. Antibiotics and antiparasitics are often used to remove unwanted GI bacteria and protozoal organisms and to help balance the normal GI bacterial flora. Anti-inflammatory and immunosuppressive drugs are used to inhibit the immune system's abnormal response on the GI tract and to help control the influx of white blood cells and the inflammation they cause within the GI tract. These drugs can be used solely or in combination depending on the severity of the case and response to therapy.

DOs

- Realize that the proper management of a pet with IBD requires significant commitment on your part-time, emotional, and financial. This is true both initially, when trying to determine whether any of the multiple possible underlying triggers for IBD is present or not, and in the long term, when giving medications at home and returning for recheck appointments.
- Realize that serious and life-threatening complications can arise if IBD is severe, left untreated, or treated inappropriately.
- Keep all recommended follow-up appointments with your veterinarian since they are essential in monitoring your pet's response to medications and treatments.
- Contact your veterinarian, if your pet's symptoms change, worsen, or any new problems arise.
- Have your veterinarian or veterinary technician show you how to handle, give, and recognize the possible side effects of all medications and take special precautions if immunosuppressive drugs have been prescribed.
- Handle and give all medications exactly as directed by your veterinarian. If your animal is having side effects from any medications or you are finding it very difficult to medicate your animal, contact your veterinarian for advice before discontinuing the treatment.
- If you are making a homemade diet for your pet, always consult with a veterinary nutritionist in order to properly balance the diet for your pet's needs.
- Ask your veterinarian questions about information you do not understand.
- If you do not trust or are not comfortable with your veterinarian, get a second opinion from another veterinarian or a veterinary internal medicine specialist (Diplomate of the American College of Veterinary Internal Medicine).
- Consider humane euthanasia if your pet is not responding to all possible treatments and you feel he or she is suffering or has a poor quality of life.

DON'Ts

- *Never* use over-the-counter medications or supplements without first consulting your veterinarian.
- Do not start any new medications, treatments, or foods without consulting your veterinarian.
- Do not discontinue any medications, treatments, or foods without consulting your veterinarian.
- Do not change any medications, treatments, or foods without consulting your veterinarian.
- Do not feed your pet any raw foods, bones, or treats without consulting your veterinarian.
- Do not allow your pet to eat any raw foods, bones, or treats without consulting your veterinarian.
- Do not allow your pet to eat any raw foods, bones, or treats without consulting your veterinarian.
- Do not allow your pet to eat any raw foods, bones, or treats without consulting your veterinarian.
- Do not postpone a visit to your veterinarian if you observe any symptoms of illness or of IBD since early diagnosis and treatment can aid in preventing serious and life-threatening complications and improving the quality of your pet's life. The initial screening tests can often be performed on an outpatient basis.
- Do not give any medications that are not prescribed by your veterinarian for the specific animal in question and for this exact condition.
- Do not stop any treatments or medications if your animal is feeling better without consulting with your veterinarian first.
- Do not assume that all sources of information are accurate or complete (e.g., Internet sites, outdated pamphlets or books, pet store workers, and friends). Ask your veterinarian for recommended sources of information.

**When to Call Your Veterinarian**

- If you are unable to give medications as prescribed or if you require a prescription refill.
- When you have any questions or concerns related to your pet's continual treatment plan or current status.

**Signs to Watch For**

- General signs and symptoms of illness, which can include changes in appetite (increase or decrease), weight loss, decrease in activity, depression, dull or poorly kept coat, and changes in behavior such as hiding and aggressiveness.
- Symptoms of IBD, which can include frequent vomiting and diarrhea and weight loss.
- Signs of secondary infections. If you notice any straining to urinate or blood in the urine, red or irritated skin, or coughing and nasal discharge, your pet could be developing a secondary infection in the urinary tract, skin, or respiratory tract, respectively.

**Routine Follow-Up**

- Since IBD is a serious disease that can deteriorate over time, it is very important to keep all recommended follow up appointments and tests with your veterinarian in order to monitor the progression of disease, document and treat any new problems that may arise, and make any needed medication adjustments. The interval of follow-up depends on severity of the IBD and response to treatment, and an approximate time interval until future recheck should be discussed at each visit.