Lymphangiectasia

ABOUT THE DIAGNOSIS

CAUSE: Lymphangiectasia is a protein-losing intestinal disease of adult dogs. With lymphangiectasia, a disruption of the lymphatic system causes leakage of protein-rich lymphatic fluid (also called lymph) into the gastrointestinal tract. This loss of lymph through the feces (stool, excrement) means the proteins within it leave the body and cannot be used for building and maintaining tissues, muscle bulk, and strength.

The lymphatic system is a network of fluid, vessels, lymph nodes, and organs throughout the body that has numerous functions. It often runs parallel and adjacent to the blood circulation. The lymphatic system is a ferrying system that carries waste substances outward from body tissues to the bloodstream. It also provides immune defense in certain areas of the body such as the spleen, tonsils, and the lining of the gastrointestinal tract (stomach and intestines). Also in the intestine, the lymphatic system absorbs fats after they are digested (chyle). In addition to fats, lymphatic fluid contains proteins and white blood cells, which are vital for the body's functions. Unfortunately, with lymphangiectasia the lymphatic circulation is disrupted and white blood cells, proteins, and fats leak into the intestinal tract and are wasted. As a result, the dog becomes malnourished. Over time, this potentially can become a life-threatening disease if it is severe and not responsive to medication.

Primary lymphangiectasia is thought to be present at birth (congenital); however, symptoms are usually seen later. Although the intestinal lymphatic system is usually affected, other signs include the accumulation of a milky-looking, chylous effusion around the lungs (chylothorax), edema or swelling under the skin precipitated by decreased protein in the blood (subcutaneous edema), and fluid in the abdominal cavity (ascites).

Secondary lymphangiectasia has many potential causes. These include inflammation of the intestine, heart problems that cause right-sided congestive heart failure, obstruction of the thoracic duct (the thin vessel that carries lymphatic fluid from the abdomen and part of the chest to the bloodstream), and certain types of intestinal cancer.

The exact cause of lymphangiectasia often cannot be determined despite extensive testing, and a large proportion of dogs with lymphangiectasia do not have any of the disorders listed above (no inciting cause is ever found).

Although soft-coated wheaten terriers, Yorkshire terriers, and Norwegian lundehunds are most commonly affected with lymphangiectasia, any breed of dog can be affected. This disorder is very uncommon in cats.

DIAGNOSIS: When lymphangiectasia is suspected, a complete blood count (CBC), serum biochemistry profile, urinalysis, and fecal analysis are performed to look for characteristic changes associated with this disease, to assess overall health, and to rule out other possible causes that could be mimicking lymphangiectasia. X-rays of the chest and abdomen may be taken to screen for fluid accumulation or signs of any inciting causes. A fine-needle aspirate helps to characterize the type of effusion in the chest and/or abdomen when present. For this procedure, a very small needle is inserted into the body cavity without the need for anesthesia; fluid is aspirated and examined under a microscope. Lymphangiectasia is diagnosed from a biopsy of the gastrointestinal tract that is obtained either endoscopically or, more commonly, during a surgical procedure. That is to say that lymphangiectasia can only be suspected, but not pinpointed, until a sample of intestinal tissue is examined by a pathologist to confirm lymphangiectasia and rule out all other possible intestinal diseases that produce similar or identical features. The biopsied intestinal tissue is submitted to a laboratory where a specialist examines it under a microscope to make the diagnosis; therefore, it is common for a period of 2-5 days to elapse after the biopsy procedure before the lab's diagnosis is known.

LIVING WITH THE DIAGNOSIS

If your dog is confirmed as having lymphangiectasia, the cornerstone of treatment is your dog's food. It is important that the diet recommended by your veterinarian be given. Alternatively, you may make your dog's diet yourself, although it is critical to offer the correct balance of nutrients for dogs. You should seek the recommendations of a veterinary nutritionist (Diplomate of the American College of Veterinary Nutrition; directory at www.acvn.org) because there are many, many impressive-sounding diets on the market, in books, or on the Internet, but only a few of them have been tested and shown to be balanced and acceptable.

This disorder can lead to malnutrition because of the loss of nutrients in the intestines. An inappropriate diet can make this process worse. Medication must also be given exactly as directed, since it may lessen the degree of loss of protein and fat. However, there is no cure for lymphangiectasia; if an underlying disease (see "Secondary lymphangiectasia" above) is not found, then treatment for lymphangiectasia is usually lifelong.

TREATMENT

If an underlying disease can be identified, it must be treated. Because a cause for lymphangiectasia is usually not determined, the symptoms are treated. A low fat and highly digestible diet that is calorie dense is an important part of therapy. An antiinflammatory medication (corticosteroid or cortisone-derivative) may be given. Your veterinarian may need to give a transfusion of plasma or a colloid fluid to replace the blood's proteins and diuretics to help control effusion in the chest and/or abdomen by eliminating the excess fluid through the urine.

DOs

- Inform your veterinarian if your cat or dog has ever been diagnosed with a medical condition and is taking medication, because this information may increase or decrease the importance of performing certain tests, influence which medications should be used for the lymphangiectasia, and may even affect the prognosis (outlook for long-term recovery).
- Give medication exactly as directed by your veterinarian, and if you are concerned about possible negative effects, discuss them with your veterinarian immediately rather than simply discontinuing the treatment.
- Realize that getting to the point of having a conclusive diagnosis of lymphangiectasia is always challenging because of the tests and biopsies required to reach the diagnosis. Furthermore, the diagnosis can be disappointing since there is no cure. However, individual response to treatment is highly variable, and often the only way to know if treatment will work for a particular dog, once the diagnosis of lymphangiectasia is made, is to try treatment and monitor response. Some dogs do very

well while others do poorly, and often the only way to know for sure is to try.

DON'Ts

- Do not substitute another diet without consulting your veterinarian first. Malnutrition is a common, life-threatening complication of this disease.

WHEN TO CALL YOUR VETERINARIAN

- If you cannot keep a scheduled appointment.
- If you are unable to give medication as directed.
- If your dog's symptoms are not improving after treatment begins.
- If your dog's appetite is decreasing.

SIGNS TO WATCH FOR

- General signs of illness: lethargy, weakness, decreased appetite, other behavior changes.
- Signs of lymphangiectasia beginning or recurring: profound weight loss despite a strong or even ravenous appetite (polyphagia), respiratory problems (if pleural effusion is present), vomiting, diarrhea, and/or lethargy.

ROUTINE FOLLOW-UP

- Follow-up visits will be scheduled as needed (depending on the exact features of your dog's case) to monitor progress, especially involving measuring body weight and blood levels of protein and white blood cells.

Practice Stamp or Name & Address