Canine Hemangiosarcoma

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Hemangiosarcoma is an aggressive cancer that arises from blood vessels. The cancer can be found anywhere in the body, since blood vessels occur throughout the body. Hemangiosarcoma is most commonly found in the spleen, liver, and heart. Prognosis is determined by the location of the disease. Although any breed of dog can develop hemangiosarcoma, certain breeds of dogs appear to be at higher risk, such as the German Shepherd, English Setter and Golden Retriever. We do not know what triggers the growth of this type of cancer.

Symptoms

Symptoms of hemangiosarcoma are usually determined by the location of the disease. Many dogs with the cancer in an internal organ show signs of intermittent or persistent weakness or even collapse. Because the cancer is producing abnormal blood vessels, these vessels tend to be very weak and prone to leaking. Further growth leads to rupture of one of these cancerous vessels, resulting in loss of blood. As the spleen is the internal organ most commonly affected by this cancer and is an organ that filters the blood, rupture can lead to blood loss into the abdomen. Rapid loss of blood causes weakness or collapse. If only a small amount of blood is lost, the episode of weakness can be temporary, since that blood can be reabsorbed into the body. If a large amount of blood is lost, the weakness is so profound that the dog may collapse. This can be an emergency situation. Distention of the belly may also be observed because of the large volume of free blood in the abdominal cavity. If the cancer is on the heart this bleeding occurs into the sac that surrounds the heart, resulting in a compromise of the heart’s ability to pump blood effectively. This also can cause weakness and potential collapse.

Metastasis

A further problem exists when the cancerous blood vessel ruptures. The release of blood into a body cavity carries with it cancer cells, effectively resulting in bathing of the cavity with cancer cells. This, along with the ease with which cancer cells break off from the abnormal blood vessels and thus gain access to the rest of the body through the bloodstream, results in rapid spread of cancer throughout the body. This spread of cancer to distant sites is termed “metastasis.” It is this widespread metastasis that makes hemangiosarcoma so difficult to treat. Often the cancer has metastasized before any clinical signs are evident.
**Staging**

When hemangiosarcoma is diagnosed (or suspected), a number of diagnostic tests will be performed to stage your dog’s cancer. Staging includes a series of tests to determine how far the cancer has spread in a patient, allowing you to make informed decisions regarding treatment. Radiographs (x-rays) of the chest will be performed to evaluate the size of the heart and the lungs and look for metastasis. A complete blood count, chemistry profile, and urinalysis will be obtained to assess overall health status. A coagulation blood panel can evaluate the ability of a patient to clot blood. Ultrasound examination of the abdomen and or the heart may also be performed in search of metastasis. Other tests may be recommended, depending on individual circumstances.

**TREATING THE PRIMARY TUMOR**

Treatment for hemangiosarcoma involves two different steps. The first is often surgery to remove the primary tumor. The spleen can be removed with little consequence in dogs. Portions of the liver and individual kidneys can also be removed without altering a patient’s lifestyle. Tumors affecting the heart may be difficult or impossible to remove, although surgery may relieve pressure from fluid accumulation around the heart. Sometimes, if multiple sites of metastases are found during the diagnostic testing, surgery will be of no benefit.

**PREVENTING AND TREATING NEW LESIONS (METASTASIS)**

Whenever we are dealing with cancers that have a high potential to metastasize, we use chemotherapy. Chemotherapy is the use of medications to interrupt the growth of cancer cells. The medications which may be effective in stopping the growth of hemangiosarcoma cells will also interrupt the normal replacement of cells which line the digestive tract and the white blood cells which form in the bone marrow to help our bodies fight infection. When chemotherapy drugs damage these normal cells, symptoms can range from a mild, temporary decrease in appetite to loose stools, vomiting, and fever. Again, many dogs have no symptoms; others improve with simple drug store remedies including Pepcid AC®, Pepto Bismol® and, most importantly, changing to a bland diet. Stronger prescription medications and antibiotics are sometimes needed, but only about 1 in 10 patients require a return visit to the hospital because of side effects. Our philosophy is that cancer patients should feel better, not worse, from their therapy!

**Other Locations**

Dogs with hemangiosarcoma located in the subcutaneous tissues (just under the skin) or muscle are treated with surgery, chemotherapy and radiation therapy due to the high chance of spread. Hemangiosarcoma can also occur on the surface of the skin of dogs. This appears to be a form of cancer induced by exposure to the sun and carries a much better prognosis than internal forms of the disease. Surgical removal of the skin form, provided it did not arise as a metastasis from the more aggressive form, usually provides the longest disease-free interval. New lesions can continue to form, however, because of the previous or continued sun damage and exposure.

New types of treatments are being investigated continuously in the hope for improving the response rate of dogs with this disease. Again, quality of life is always the main goal, and this can often be achieved by working closely with your veterinary team.