

HEMOABDOMEN AND HEMANGIOMA/HEMANGIOSARCOMA

Hemoabdomen is a term used to describe free blood within the abdominal cavity. The blood can be lost from vessels when a blood clotting/coagulation abnormality exists or vessels torn by organ displacement, such as with “bloat”/gastric dilatation and volvulus/GDV. Perhaps more commonly, free blood originates from organs injured during a traumatic event or from pathologic organs infiltrated by neoplasia/cancer. One of the most common types of cancers to cause this situation is that of the cells lining blood vessels; hemangioma (benign version)/hemangiosarcoma (malignant version). The treatment of and prognosis for a hemoabdomen depends completely on the cause. Applying pressure with a belly wrap to stop the bleed may be successful in a few cases, but largely surgery is the treatment of choice. In clotting disorders/coagulopathies, medical management is the approach and surgery is contraindicated.

Hemangioma and hemangiosarcoma are relatively common cancers of dogs. Many studies suggest a 50:50 chance for this tumor type being benign vs. malignant in any given patient. The differentiation of hemangioma vs. hemangiosarcoma can only be made by obtaining a tissue sample and having it analyzed microscopically. The remainder of this handout discusses hemangiosarcoma specifically.

Hemangiosarcoma (HSA) tends to affect older dogs with males, German Shepherds and Golden Retrievers being at higher risk, than females and other breeds. The most common site of the primary tumor is the spleen (~50%), followed by the heart (~25%). Other organs can certainly harbor a primary tumor and sometimes multiple primary tumors occur on different organs. These neoplasms are very aggressive with a lot of local destruction caused by the primary tumor and rapid metastasis/spreading to other sites. Any organ or tissue in the body is essentially a candidate site for metastasis.

Splenic HSA causes a problem when the tumor grows so large that it ruptures. The patient usually hemorrhages profusely into their abdominal cavity. The patient becomes unstable from the anemia and hypovolemia (low blood volume left within the blood vessels) that develop. They often present collapsed with respiratory distress, weakness, pale mucous membranes, and a rapid heart rate. The owner may or may not have noticed any abnormalities prior to the acute/sudden collapse. Free blood in the abdomen is usually very detectable to the veterinarian. The abdomen is often noticeably distended and firm. Radiographs/x-rays and/or ultrasound show free fluid. Tapping a sample with a needle and syringe proves blood to be the free fluid. Radiographs/ultrasound will also often show a large, mid-abdominal tumor, but not always. If there is no history/signs of trauma and blood clotting/coagulation is normal, HSA becomes the primary differential diagnosis.

Treatment of a ruptured splenic HSA involves replacing the blood volume lost with IV fluids and often blood transfusions. Oxygen supplementation and other supportive/symptomatic care are provided. Once/if the patient becomes stabilized adequately, an emergency abdominal exploratory is performed. If a bleeding splenic mass is found, the spleen is removed. A biopsy sample of the mass is sent in for analysis to differentiate hemangiosarcoma from its benign variant. Gross visualization of the abdomen during surgery can help guide discussions of prognosis. In many cases, metastasis is very obvious around the abdomen. When multiple, non-resectable (non-removable) metastatic tumors are bleeding, the prognosis becomes very poor.

Cardiac HSA causes a problem when the tumor bleeds into the space surrounding the heart (pericardial effusion). The patient becomes unstable due to right-sided heart compression and failure and heart arrhythmias, rather than anemia and hypovolemia. Often this results in collapse and respiratory distress. Again, the owner may or may not have noticed any abnormalities prior to the acute/sudden collapse. Treatment involves tapping fluid off of the heart to relieve compression and medical management of arrhythmias. Cardiac ultrasound is needed to confirm the presence of a mass. Surgical resection of the mass may or may not be possible.

Chemotherapy for HSA is used with or without surgical debulking first. Success rates are variable. It is wise to consult a board-certified Oncologist or Internal Medicine specialist for chemotherapy administration.

The prognosis for hemangiosarcoma is guarded to poor. Reported average survival times range from 20-60 days. Certainly these times vary with the location of the tumor and stage of disease. Surgery and/or chemotherapy are generally looked at as being palliative and not curative.