



ANIMAL EMERGENCY CENTER

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at the heart of critical care

HEMANGIOSARCOMA IN DOGS

INTRODUCTION

Hemangiosarcomas (HSA) are malignant tumors derived from the cells lining blood vessels (*hem* = blood, *angio* = vessel, *sarcoma* = tumor). Although very rare in humans, HSA are considerably more common in dogs. Since blood vessels occur throughout the body, HSA can occur anywhere in the body as well. However, the most common sites are the skin, spleen, liver, and heart. Most HSA (except some appearing in the skin) are both locally aggressive and have a high likelihood of spreading to other parts of the body. These tumors are typically filled with blood, and very fragile. Dogs with HSA occurring inside the body may have signs related to blood loss into the abdomen or into the space around the heart, resulting in weakness, lethargy, pale gums, etc. Dogs with cutaneous HSA may simply have a mass in or under the skin. Some of these cutaneous tumors may occur in light-skinned dogs as a result of sun exposure.

DIAGNOSIS AND STAGING

Dogs presenting with evidence of tumor rupture into the abdomen will often be taken to surgery on an urgent basis, as often the blood loss is severe. Prior to surgery, it is important to perform blood tests to evaluate blood cell numbers (esp. red blood cells and platelets), blood clotting ability and organ function. X-rays of the chest and ultrasound of the abdomen are often performed as well. These tests are performed to insure that it will be safe to perform anesthesia and surgery, and that there is no evidence of spread that is large enough to see (Dogs with visible spread may not benefit from surgery). Some dogs with HSA may require supportive care with fluid therapy and/or blood transfusions prior to or during surgery. Some dogs with HSA of the spleen may have problems related to irregular heart rhythm at the time of surgery that could require treatment as well.

TREATMENT AND PROGNOSIS

The majority of dogs with HSA arising from a location other than the skin will develop problems related to tumor spread (metastasis) in the future. This happens in an average of **1-3 months** if surgery only is performed, but metastasis may be delayed if chemotherapy is given after surgery. Chemotherapy typically consists of *doxorubicin* [Adriamycin] given once every 3 weeks for a total of five treatments. Chemotherapy is generally well tolerated, with some dogs experiencing mild side effects that usually go away by themselves. Less than 5% of dogs experience severe side effects that would require hospitalization and supportive care. Following the completion of chemotherapy, regular rechecks are recommended. Despite these treatments, the long-term prognosis for dogs with HSA is generally poor. Average survival times with surgery and chemotherapy are approximately 5-7 months, with only 10% of dogs surviving for one year. Dogs with HSA of the skin surface may have a better prognosis after surgery, depending on the appearance of the tumor under the microscope, and the completeness of surgical removal. Some dogs with HSA of the skin can be treated effectively and remain cancer-free for a long period of time with surgery alone, while others do have the potential to metastasize.