The impact of neoadjuvant prednisone on grade and proliferation indices in canine cutaneous mast cell tumors: A pilot study

Purpose

To determine if administering prednisone prior to surgery affects the factors used to define the grade of mast cell tumors, and thus potentially affects prognosis and treatment recommendations.

Background

Mast cell tumors are the most common malignant skin tumor in dogs. The prognosis is highly-dependent upon the tumor grade, which can only be determined by histopathology (biopsy). For low-grade tumors, complete surgical removal is curative. However, nearly 100% of dogs with high-grade tumors will succumb to their disease within 6 months to a year of diagnosis. Treatment with prednisone is an effective treatment as sole therapy. It is also used prior to surgery to shrink the tumor or as part of a chemotherapy protocol used in dogs with high-grade tumors. However, it is unknown how the use of prednisone prior to surgery affects the factors used to define the tumor grade, which has potential to impact the prognosis and recommended further treatment options.

Eligibility

• Cytological diagnosis of cutaneous mast cell tumor
• Body weight > 5kg
• Tumor size of between 1 and 10 cm in diameter

Exclusion

• Previous therapy to current tumor including chemotherapy, corticosteroids, tyrosine kinase inhibitors, or radiation. (Recurrent tumor is acceptable, H1 and H2 blocking agents are acceptable)
• Evidence of concurrent significant biochemical or hematological abnormalities

Study Design

All dogs will undergo a complete physical exam, lab work, and fine needle aspirate cytology of the tumor. If a definitive diagnosis of mast cell tumor is obtained and other criteria are met, eligible dogs will be offered the opportunity to enroll in the study. Within 7 days of enrollment, we will obtain a small incisional biopsy of the tumor and perform histopathological tumor evaluation and determination of proliferation indices levels. You will then administer at-home treatment with daily prednisone for 10-14 days. Following prednisone treatment, your pet will undergo surgical removal of the mast cell tumor. The tumor will be submitted for diagnosis, tumor grading, and measurement. Once your pet is discharged from surgery, your participation in the study is completed. After biopsy results are finalized, you will receive a phone call informing you of these results. You will also receive recommendations for further tests or treatments by our Board-certified Veterinary Oncologists. There is no obligation to pursue any further testing or treatment.

Compensation

Once the dog is deemed eligible and informed consent is obtained, the study will cover the expenses for the pre-treatment biopsy, the prednisone treatment, and $1,000 towards the cost of surgery. This compensation will only partially cover the cost surgical removal. Typical cost of a skin mass removal in the Veterinary Teaching Hospital is $1,800-2,200. You are responsible for any other clinical fees associated with the screening procedures, surgery, any identified concurrent medical issues, or complications associated with surgery.

Contact

Dr. Shawna Klahn, Oncology  
Office Phone: (540) 231-4621 | Email: klahn@vt.edu

Mindy Quigley, Clinical Trials Coordinator  
Office Phone: (540) 231-1363 | Email: mindyq@vt.edu

If your query is urgent, please call the Small Animal Hospital (540) 231-4621 and ask for the oncologist on duty.