A Case of Canine Mast Cell Neoplasia

Cyril Boynes, D.V.M.

Mast cell neoplasia accounts for about 2-6% of all neoplasms in the dog. Cutaneous mass cell tumors are common in the dog and account for about 20% of all malignant skin tumors. The cause of mass cell tumors is unknown but a viral etiology has been incriminated and a genetic predisposition has been observed in certain breeds such as the Boxer.

Cutaneous mass cell tumor can invade locally or can metastasize to regional lymph nodes and hemopoietic sites such as bone marrow, spleen, and liver. Solid organ metastases might occur in the G.I. tract and infrequently, pulmonary metastases are observed.

Clinical tests for a dog suspected of mass cell tumor include:

1. Routine hematology and chemistry profiles
2. Chest and abdominal radiographs
3. Examination of a buffy coat smear for the presence of circulatory mass cell
4. Bone marrow aspiration

HISTORY:

June 1990: Veterinarian removed both testicles of “George,” a 10 year old Springer Spaniel, as he suspected a tumor within the testicles. Nevertheless, the testicles were found to be normal. A swelling occurred in the area following the surgery.

June 24: Treatment with Prednisone was begun, 20 mg tablets, once daily for 4 days. The dosage was gradually decreased until July 10.

July 29: Prednisone was once again administered for a few days, due to swelling in the area.

Sept 17: The swelling again increased and Prednisone was again administered until October 2, 1990.

Dec 1990: The same veterinarian operated again and removed a mass in the vicinity of the genital area.

Jan-Mar: Pet was OK, with only slight swelling.

Mar: Sublumbar lymph nodes were enlarged with recurrent swelling. Veterinarian gave more Prednisone.

Apr 23: Swelling increased severely. Pet was taken to the Veterinary Teaching Hospital at the University of Pennsylvania.

Apr 25: Pet was released from University with the following report:

Discharge Diagnosis:
C-Mast cell tumor, too extensive for surgical removal.

Medications and Directions for Use:
Clomifene (150 mg.) one pill 3 times daily
Diphenhydramine (75 mg.) one pill each color 3 times daily
Prednisone (20 mg.) one pill once daily

Specific Instructions:
George presented to Emergency Service and was transferred to Medicine for examination of his mast cell tumor. Aspiration confirmed the diagnosis of mast cell tumor. Radiographs showed enlargement of sublumbar lymph nodes, and his blood tests indicate he may have some liver function defects. Unfortunately, there is no cure for this tumor, and chemotherapy has been less than effective in controlling its spread. The medications above are to help control the inflammation and, possibly, stomach ulcers. Please give them as directed. George has a limited time left, hopefully he can enjoy some homelife. Please call if you have any questions, concerns, or problems. George is a sweet dog; best wishes for some good times together.
Apr 25: George was brought to Dr. Boynes at 8 PM. Pet appeared depressed, weak, lethargic with pale mucous membranes. Also anorexic, with extensive swelling in abdominal and genital regions.

Medication dispensed: BHI Liver tablets at 1 tid for 7 days, Lymphomyosot liquid at 10 drops tid. Injected 2.2 ml Ubichinon comp over swollen areas. Dispensed 2 vials of Ubichinon comp to owner for s.c. administration, one vial every 2 days. Also, Acizyme liver enzyme was dispensed to help strengthen the liver meridian.

Apr 30: Owner called and said George is running around and doing well. Most of the swelling had decreased.

May 4: Return to Dr. Boynes for examination. Eyes less inflamed than on April 25. Mucous membranes restored with pink color. Genital and abdominal areas less swollen than on April 25 but more swollen than on April 30, when owner called. Pet not urinating as much, said owner.

Gave one full vial (2.2 ml.) Ubichinon comp s.c. in clinic and dispensed 5 vials of same for owner to take home and administer s.c. at 1 vial every 3 days. Also dispensed Traumeel tablets, 1 tid for 10 days, for regeneration of sulphide enzymes. Also, BHI Inflammation, at the same dosage. Owner still had some Lymphomyosot, which Dr. Boynes told him he could use in conjunction with the other medications.

May 18: Pet doing great. Showed a lot of strength; pulled owner into examination room on leash. Swelling had decreased completely, with a small hard or sclerotic area over where the original mass had most likely been removed.

Dispensed Galium-Heel at 6 drops tid and BHI Liver at 1 tablet tid for 21 days.

Viscum mite to be given s.c on May 20, Viscum medium on May 21, and Viscum forte on May 22, 1991.

Owner was advised to watch for fever and look for adverse reactions. Neither occurred.

Jun 1991: Pet is doing fine. Good appetite, pleasant disposition, sleeping well. Owner will continue to monitor progress.