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"Partners in quality care for animals"

EDGEMONT VET CLINIC 740 Phone: 403-239-4657 Fax: 1-403-241-1308 Rcvd: 23-Mar-2007 12:53 pm
#12 - 34 EDGEDALE DR. NW Email: Rptd: 31-Mar-2007 1:28 pm
CALGARY, AB T3A 2R4

Patient: BLIZZARD GORDON Accession: C070303778 Group: C070303778 Final
Age: 11Y Sex: M Neutered: Y Species: Canine Shepherd Vet: Kerr

PM FOR WHITE SHEP CLUB. HX - PERIANAL FISTULES, LICK GRANULOMAS, ARTHRITIS. MULTI LUMPS.

PRIVATE CREMATION

HISTO # C07-0961

Tests Ordered: NECRP

Test	Normal	Out of Range	Units	Reference Range
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Histology

Necropsy

THE DOG REVEALED MODERATE BODY CONDITION . BLOOD STAINED FROTH WAS NOTED IN DISTAL TRACHEA EXTENDING INTO THE MAJOR STEM BRONCHI OF THE LUNG . THE THYMUS WAS IRREGULAR WITH ENLARGEMENT AT THE ANTERIOR POLE ADJACENT TO THE THORACIC INLET
SPLEEN WAS MODDERATELY ENLARGED.
REMAINING INTERNAL ORGANS APPEARED NORMAL
SKIN LESIONS NOTED ON THE HISTORY WERE NOTED
INTERNAL ORGANS WERE SAMPLED AND SUBMITTED FOR HISTOLOGICAL EVALUATION
SLT INTERNAL HYDROCEPHALUS NOTED ON CUTTING BRAIN SECTIONS
Dr. Norman Lowes

PM 1HR X 2

Comments:

Dr. Jennifer Davies

Dr. Norman Lowes

- 1. ARTHRITIS
- 2. CANCER, THYMOMA
- 3. OLD DOG MYELOPATHY
- 4. PF
- 5. LICK GRANULOMA
- 6. ✓

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■ Edmonton	8131 Roper Road, Edmonton, AB T6E 6S4	Ph: (780) 437-8808	Fx: (780) 437-8822	1-800-668-8855

20 April 2007

LAB NO: C07-0961 (CAL LAB)
HOSPITAL: EDGEMONT VET CLINIC 207030378 C
DOCTOR: KERR
OWNER: GORDON
ANIMAL: BLIZZARD
BIOPSY SITE: NECROPSY

GROSS: The dog revealed moderate body condition. Blood-stained froth was noted in the distal trachea extending into the major stem bronchi of the lung. The thymus was irregular with enlargement at the anterior pole adjacent to the thoracic inlet. The spleen was moderately enlarged. The remaining internal organs appeared normal. The skin lesions noted in the history were noted. Internal organs were sampled and submitted for histological evaluation. Slight internal hydrocephalus was noted on cutting brain sections.

Norman Lowes, DVM; MVSc.

HISTOLOGY: THYMUS - Thymic architecture is destroyed by a homogeneous sheet of small to medium lymphocytes which are seen to be readily invading connective tissue trabeculae throughout the section. The lymphocytes are intermixed with a population of larger elliptical cells with a large vesicular nucleus suggestive of epithelial cells. There are a number of eosinophils scattered throughout the gland. Lymphoid follicles can occasionally be observed. LIVER - There is moderate to marked sinusoidal dilation and congestion throughout the section. Hepatocytes exhibit a mild degree of cytoplasmic granularity associated with a waxy, grayish-brown pigmented granular material. There is also a mild degree of hepatocellular and a cytoplasmic vacuolation. LUNG - There is moderate to marked generalized congestion. There is a mild degree of smooth muscle hyperplasia of smaller bronchioles. SPLEEN - There is patchy sinus congestion. BONE MARROW - There is increased cellularity with all cell lines represented. Coarse iron stores are adequate. There is a slight increase in the myeloid to erythroid ratio. KIDNEY - There is one wedge-shaped focus involving the cortex of the kidney with depression of the overlying capsular surface. This wedge shape

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Page 2
C07-0961

is characterized by marked tubular drop out, interstitial fibrosis, multifocal to coalescing mixed mononuclear inflammatory cell infiltrate and cystic dilation of shrunken glomeruli. Protein is occasionally observed in dilated tubules within the wedge-shaped focus. HEART - There is mild to moderate scattered fatty replacement within the ventricles with occasional cardiomyofiber degeneration and myofibrosis. One focus was observed characterized by significant fibrosis causing loss and drop out of cardiomyofibers. The main focus of the fibrosis did exhibit small bundles and individual cardiomyofibers within the fibrosis. At the edge of the major portion of the fibrosis, fingers of fibrous connective tissue were running out between individual cardiomyofibers causing atrophy and some drop out of those fibers. BRAIN - There is one mild lymphocytic perivascular cuff in the cortex. PITUITARY, STOMACH, ADRENAL, PANCREAS, THYROID, SPLEEN AND INTESTINAL TRACT - No significant lesions.

DIAGNOSIS:THYROMA.MARKED HEPATIC AND PULMONARY CONGESTION.MILD TO MODERATE FOCAL MYOCARDIAL FIBROSIS WITH FATTY REPLACEMENT.**COMMENTS:**

The dog was confirmed to have a thymic enlargement due to a thymoma. The thymoma was contained to the thymus gland and there was no evidence of metastasis. The tumor in the thymus gland likely was causing pressure in the anterior thorax and it may have led to some respiratory difficulty. The smooth muscle hyperplasia of the smaller bronchioles would suggest that there had been some respiratory difficulty for a period of time. Thymomas are typically associated with respiratory difficulty due to the space occupying lesion which develops in the anterior thorax and this can be associated with coughing as well as regurgitation of food if the mass is significantly impairing function of the esophagus and trachea. Thymoma is a relatively uncommon tumor of animals which is usually observed in dogs ten years and older. German Shepherds seem to be over-represented with regard to this tumor. The pulmonary and hepatic congestion may have been terminal. However, in view of the fibrosis and fatty replacement observed within the heart sections, one would wonder if there might not have been a compensated heart problem in this dog. No cause for the fibrosis was observed and changes within the heart cells were only observed in association with the fibrosis

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Page 3
C07-0961

suggesting that there may have been a prior insult to the heart which led to fibrosis and loss of cardiomyofibers. There was no evidence of inflammation and changes which would be compatible with cardiomyopathy generally were not observed. The wedge-shaped lesion in the kidney is suggestive of a prior renal infarct. In summary, the dog suffered from a thymoma in the anterior mediastinum which was most likely causing some degree of breathing difficulty as evidenced by the smooth muscle hyperplasia in the bronchioles. Thymoma has been associated with myasthenia gravis in some animals and humans.

Ann Britton, DVM; MSc; PhD

AB