

REPORT OF LABORATORY EXAMINATION

FINAL

PAGE 1 OF 3 (1)

DIAGNOSTIC CENTER FOR POPULATION AND ANIMAL HEALTH

P.O. Box 30076
Lansing, MI, 48909-7576
Phone (517) 353-5275



GROSS NECROPSY

Case Number: 2983124
Reported : 09/17/04
Received : 09/07/04
Pathologist: RCS
Case Origin: NECROPSY

PRIVILEGED INFORMATION
NOT FOR PUBLICATION

Client Account: 295483

Clinic:

AMERICAN WHITE SHEPHERD ASSN.
P.O. BOX 2068
HOWELL MI 48844-2068

Phone: 517-546-3046

Anim. #: 1 Name: RAJA Age: 9y 11m
Breed: GERMAN SHEPHERD DOG Sex: FEMALE

HISTORY : This dog had a one year history of hind limb paresis. She died suddenly on 9/6/04.

SPECIMEN: CARCASS

SP. CORD REMOVAL <200 LB

This 67-pound female adult German Shepherd dog of adequate nutrition and hydration states was presented dead for necropsy. There was a tattoo inside the right ear pinna reading what appeared to be "14020C". The subcutaneous tissues were diffusely icteric. All internal adipose tissue was also diffusely icteric. There was about 2 liters of red fluid within the abdominal cavity. The spleen was characterized by 2 focal, red to purple, raised nodules measuring 2.5 cm and 5 cm in diameter that extended into the parenchyma on cut surface. There were also numerous multifocal to coalescing, red to purple, raised nodules ranging in size from 3 mm to 15 cm in diameter found on the liver that extended into the parenchyma on cut surface. There were numerous multifocal red to purple nodules ranging in size from 2 mm to 5 mm in diameter found scattered throughout the mesentery. There were about 10 red raised nodules ranging in size from 2 to 5 mm in diameter within the lung that extended into the parenchyma on cut surface. There was a focal, red, raised, 5 mm in diameter nodule on the surface of the right auricle. Upon examination of the spinal column partially protruding discs were noted at T9-T10, L5 and L6. A 5 mm long section of spinal cord between L5 and L6 appeared thinner than the rest of the spinal cord.

* GROSS DIAGNOSIS

1. Spleen, liver, mesentery, lung, heart: metastatic hemangiosarcoma with intraabdominal hemorrhage.
2. T9, T10, L5, L6: intervertebral disc protrusion.

*DENOTES ADDITIONAL TEST RESULTS
MSU IS AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY INSTITUTION

Case Number: 2983124

Comments: The lesions are consistent with metastatic hemangiosarcoma. The cause of death is due to acute rupture and hemorrhage of one of the intraabdominal masses. Histopathology is being performed to confirm this diagnosis. The spinal cord and brain will also be examined histologically to look for signs of degenerative myelopathy.

As of September 8, 2004, tests are pending in the laboratory sections checked below:

Bacteriology	Virology/Serology	Nutrition
Toxicology	X Histopathology	Clinical Pathology
Parasitology	Other	

SPECIMEN: FIXED TISSUES

* HISTOPATHOLOGIC EXAMINATION

Sections of brain, spinal cord, lung, heart, liver, ileum, pancreas, adrenal gland, spleen, kidney, lymph node and mesentery were examined. All tissues exhibited moderate autolysis. Sections of spinal cord were characterized by multiple spheroids within the gray matter indicating neuronal degeneration. Moderate amounts of lipofuscin were seen within degenerating neurons. The neurons also exhibited moderate axonal swelling. Mild vacuolation was noted in the white matter of each funiculi in all sections of spinal cord. The spinal nerve roots were characterized by moderate degeneration as evidenced by loss of myelin sheaths, vacuolation and multifocal areas of mineralization. The meningeal lining was thickened with a mild mononuclear inflammatory cell infiltrate. Sections of spleen were characterized by a focal proliferation of vasoformative, neoplastic, mesenchymal cells forming irregular and incomplete vascular channels filled with red blood cells. The neoplastic cells were spindloid, contained a moderate amount of eosinophilic cytoplasm with indistinct cell borders and exhibited marked atypia. The nuclei were oval to fusiform, hyperchromatic and exhibited marked anisokaryosis. One to 3 mitotic figures were noted per high power field. Multiple fibrin thrombi were present throughout sections of spleen. Marked extramedullary hematopoieses and diffuse lymphoid follicular depletion were also noted. Sections of liver were characterized by multifocal areas of marked hemorrhage, necrosis and fibrin thrombi surrounded by a mixed inflammatory cell infiltrate consisting of neutrophils, lymphocytes, plasma cells and macrophages. There were also multifocal to coalescing areas of vasoformative proliferations of neoplastic mesenchymal cells forming incomplete and irregular vascular channels filled with red blood cells. The neoplastic cells were of the same type as those described in the spleen. Neoplastic cells were seen within sinusoids and replaced the normal architecture. There were as many as 3 to 4 mitotic figures per high power field in some areas of neoplastic cell proliferations. There was severe, diffuse congestion as evidence by markedly distended sinusoids filled with blood and mixed inflammatory cells of the same type as described previously. Severe, diffuse intrahepatic cholestasis and marked centrilobular necrosis were also noted.

*DENOTES ADDITIONAL TEST RESULTS
MSU IS AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY INSTITUTION

Case Number: 2983124

Sections of lung were characterized by a single cavitary mass lined by atypical neoplastic mesenchymal cells and filled with red blood cells and fibrinoid necrosis. Mild extramedullary hematopoiesis as evidenced by occasional megakaryocytes were also noted within sections of lung. The same type of neoplastic mesenchymal cells as previously described were also seen invading between myofibers of the right atrium. Severe, multifocal areas of hemorrhage and necrosis were also present in sections of heart. A mass of neoplastic mesenchymal cells similar to the previous masses described was also noted in a mesenteric attachment to the pancreas. Sections of lymph node were characterized by multifocal areas of moderate hemorrhage and diffuse hemosiderin-laden macrophages. Sections of kidney were characterized by multifocal mononuclear inflammatory cell infiltrates.

* CONCLUSION

1. Spleen, liver, mesentery, lung, right atrium, colon: metastatic hemangiosarcoma.
2. Spinal cord: degenerative myelopathy.

COMMENTS:

The lesions seen grossly and histologically within the spleen, liver, mesentery, right atrium and lung are consistent with metastatic hemangiosarcoma which resulted in death of this dog. Degenerative myelopathy was also confirmed histologically within spinal cord sections.

Rebecca Smedley
Resident/Pathologist

Behzad Yamini
Pathologist

(517) 353-5275

mks/mah