

UNIVERSITY OF MINNESOTA

Veterinary Diagnostic Laboratory
College of Veterinary Medicine
1333 Gortner Avenue
St. Paul, MN 55108

1-800-605-8787
612-625-8787
Fax: 612-624-8707
e-mail: vdl@umn.edu
www.vdl.umn.edu

Accession Number: D06-010245

Owner: PRINKKILA-ROGERS, MARY ANNE
5413 DAISY AVE
VIRGINIA, MN 55792

Veterinarian:
Northland Animal Hospital, Ltd
712 8th Street North
Virginia, MN 55792

Site:
Received: 02/24/2006
Reference:
Species: Canine "REKA"
Breed: White German Shepherd Dog
Age: 8 y
Sex: SF
Weight: 40 kg (per submitter)

History: Progressive neurologic deficits: severe spinal hind limb ataxia. Euthanasia, 02/24/06, 0900 h.

Necropsy: A female spayed, White German Shepherd dog in good post-mortem condition is necropsied on 02/24/06. The body condition is good with adequate musculing and ample adipose stores.

Integument: The skin of the lateral cubital region is bilaterally callous in circumscribed, approximately 4 x 2 cm areas. Two blue ligatures reside near the midline in the subcutis of the ventrocaudal abdominal region.

Lungs: Multiple, submiliary, hard, tan foci are disseminated throughout the parenchyma of the left caudal and caudal portion of the left cranial lobe.

Heart: The stroma of both atrioventricular valves is expanded by multiple, circumscribed approximately 2 x 2 x 2 mm nodules.

Spleen: The capsule near the distal extremity has multiple, small foci of opacity and bright yellow discoloration, the largest approximately 5 x 2 mm.

Musculoskeletal apparatus: In the right femorotibial joint, the medial aspect of the articular surface of the medial femoral condyle has superficial cartilaginous erosions. Several small osteophytes are evident on the distal femur at the insertion of the joint capsule and on the lateral aspect of the medial femoral condyle.

The right acetabulum is slightly shallow, and the right femoral neck somewhat thickened.

The intervertebral joint between lumbar vertebrae L2 and L3 is ventrally bridged by osteophyte formation. Small osteophytes are also evident on the ventral aspects of the vertebrae at L1 and L2

No significant lesions are seen in brain, spinal cord, oral cavity, thyroid gland, liver, pancreas, gastrointestinal tract, adrenal glands, kidneys, urinary bladder or bone marrow

Histopathology: Spinal cord: Throughout transverse sections representing cervical, thoracic and lumbar cord, occasional, disseminated myelin sheaths in the peripheral portions of dorsal, lateral and medial funiculi are distended; rarely, the distended sheaths contain gitter cells. In one section representing a proximal lumbar segment (block 12), lesions are marked, with slight predominance of lesions in the peripheral portions of dorsal and medial funiculi.

Vertebrae L2-L3: In a sagittal, decalcified section representing the ankyloitic portion of L2 and L3, including the intervertebral space with contents, a portion of the annulus fibrosus extends ventrally between two projections of cancellous bone that extend from the cortical lips of the two vertebrae.

Spleen: In an extensive focus at near one edge, the capsule is attenuated and cluttered with granular, intensely basophilic material. Sinuses beneath that area are slightly widened. A trabecula extending from the focus contains deposits of hematoidin. Adjacent stroma is expanded by loose fibrous connective tissue. Clusters of siderophages are scattered within this area as well as throughout the red pulp. The white pulp has occasional, slight expansion of periarterial lymphoid sheaths by nodular clusters of immature lymphocytes.

No significant lesions are seen in sections of eye, brain, pituitary gland, thyroid gland, parathyroid glands, adrenal gland, lung (rare foci of subpleural interstitial ossification), heart, liver, stomach, jejunum, colon, mesenteric lymph node, kidney, bone marrow.

Diagnosis: Gross1. Lumbar spondylosis, mild2. Osteoarthritis, chronic, mild, left femorotibial and right coxofemoral joints3. Cardiac valvular endocardiosis, mild4. Splenic capsular fibrosis and hemosiderosis, focal, chronic, mild5. Pulmonary multifocal interstitial ossification, chronic, mild

Microscopic1. Axonal and myelin degeneration, diffuse, bilateral, mild (cervical, thoracic, lumbar) to moderate (proximal lumbar)2. Spondylosis ankylosans, focal, chronic (L2-L3)4. Splenic capsular fibrosis and hemosiderosis, focal, chronic, mild5. Pulmonary multifocal interstitial ossification, chronic, mild

Comment: Given the reported clinical neurologic signs, findings on the lumbar spine are remarkably mild. A specific gross morphologic correlate for the reported clinical signs is not evident.

Lesions in the spinal cord are compatible with "myelopathy of old dogs". A specific pathogenesis or cause is not evident. Given the discontinuous distribution of lesions within the cord, a multifocal or diffuse insult is suspected.

Work pending: none

Patrick Caplazi, DVM, PhD, Diplomate ACVP

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Fax (218) 741-7511 Ph (218) 749-5206

Fax:	Mail:	Written:	Addendum:
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