

Animal Disease Diagnostic Laboratory
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ADDL Case #: A20-12906

Clinic ACC#: S2020-064-010061

Date Received: 3/4/2020

Submitter

JASE SKELTON
VETERINARY TEACHING HOSPITAL
PURDUE UNIVERSITY
WEST LAFAYETTE, IN 47907

Owner

JESSICA WALKER

HAMMOND, IN

Vet Phone: (765)494-8548

Species: Equine

Sex: Female

Vet Fax: 496-2641

Breed: Thoroughbred

Age: 8 Years

Premise ID: None Submitted

Animal ID: (1)Confession

Tests Requested in: Bact, Other Services, Path

Test	Ordered	Status	Completed
Aerobic culture	3/5/2020	Complete	3/10/2020
Case Summary	3/4/2020	Complete	3/13/2020
Gross Report	3/4/2020	Complete	3/5/2020
Histology	3/4/2020	Complete	3/11/2020
Special Stains	3/9/2020	Complete	3/13/2020

Final Report

3/13/2020 4:30:01 PM

Pathology by Mario Sola and Katelin Davis, PathologistsCase Summary (3/13/2020)**Additional Histology:**

Congo Red stain on section of mass lateral to left hock: Extracellular material has apple green birefringence with polarized light (consistent with amyloid). Amyloid is also present within the wall of vessels.

Diagnosis:

Subcutaneous mass lateral to left hock: Cutaneous amyloidosis.

Subcutaneous nodule: Mixed lymphoma (Suspect T-cell-rich large B-cell lymphoma)

Small intestine: Mild lymphocytic and eosinophilic enteritis

Liver: Mild zone 1 hepatocellular vacuolar hepatopathy (suspect glycogen accumulation)

Comment on Diagnosis:

The cause of asymmetrical muscle atrophy and reported hindlimb lameness was not determined. There are reports in the literature of T-cell-rich large B-cell lymphoma infiltrating peripheral nerves, spinal nerve roots, and/or the spinal cord, resulting in asymmetric muscle atrophy. A spinal cord removal was not performed on this horse, therefore, the spinal cord and spinal nerve roots were not assessed.

No neoplastic cells were present within the cutaneous amyloidosis. In addition, all nodules diagnosed with mixed lymphoma were at distant sites from the mass of amyloid (the inner thigh and caudal ventrum). Equine cutaneous amyloidosis has been reported as an idiopathic process, associated with chronic inflammation, and/or

in association with round cell tumors. There is a report of malignant lymphoma being associated with cutaneous amyloidosis (Gliatto JM and Airoy J, Cutaneous amyloidosis in a horse with lymphoma) in which the neoplastic cells were not directly associated with the cutaneous amyloidosis. The underlying pathogenesis of the cutaneous amyloidosis in this horse was not determined. There was no evidence of amyloid elsewhere in the body at necropsy or microscopically.

Histopathologic Examination (3/11/2020)

Description of Histopathology:

Subcutaneous mass grossly diagnosed as an abscess, lateral to left hock: A mass of amorphous amphiphilic, extracellular material is on a fibrocollagenous stroma and is encapsulated by a thick layer of fibrous connective tissue. Embedded in the material is basophilic mineralized debris, yellow pigment (consistent with hematoidin), hemosiderin-laden macrophages, and scattered lymphocytes, histiocytes, and plasma cells. Vascular structures and branching mature fibrous stroma is spanning through the encapsulated mass and the amphiphilic material is within the wall of vessels. No neoplastic cells or etiologic agents are present.

Two subcutaneous nodules: Within the subcutis is an unencapsulated, moderately well circumscribed mass of neoplastic round cells. Neoplastic cells are arranged in sheets on a fine fibrovascular stroma. There are two populations of round cells. The primary population makes up approximately 75% of cells in the mass and are consistent with small lymphocytes. These cells have small, round, hyperchromatic nuclei with scant amphiphilic cytoplasm. The remaining 25% of cells are medium to large sized and have moderate anisocytosis and anisokaryosis. These cells have moderate amphiphilic cytoplasm and well-defined cell borders. Nuclei are large, round, eccentrically located with coarsely clumped chromatin and 1-2 prominent nucleolus. Binucleation is infrequent and mitotic figures are rare (up to 2 in ten 400x power field).

Brain stem: Very rare axon myelin sheaths are dilated, do not contain an axon, and contain a foamy gitter cell (digestion chamber).

Small intestines: Small numbers of eosinophils, mild edema, and increased numbers of lymphocytes are expanding the submucosa and the lamina propria.

Liver: Hepatocytes in zone 1 of hepatic lobules contain moderate, intracytoplasmic, fine, lacy, clear vacuoles (consistent with glycogen). Multifocally in periportal regions are aggregates of myeloid and erythroid precursors (extramedullary hematopoiesis).

Microscopic findings were not present in sections of cerebrum, cerebellum, lung, spleen, pancreas, trachea, thyroid gland, adrenal gland, kidney, heart, left sciatic nerve, right sciatic nerve, left rectus femoris muscle, right rectus femoris muscle, or large intestines.

Morphologic Diagnosis:

Subcutaneous mass lateral to left hock: Diagnosis pending special stains.

Subcutaneous nodule: Mixed lymphoma (Suspect T-cell-rich large B-cell lymphoma)

Small intestine: Mild lymphocytic and eosinophilic enteritis

Liver: Mild zone 1 hepatocellular vacuolar hepatopathy (suspect glycogen accumulation)

Comment on Histopathology:

The cause of the unilateral hind limb muscle atrophy was not determined.

Additional stains are pending on sections of the subcutaneous mass lateral to the hock (grossly diagnosed as an inspissated abscess). It is unclear at this time what the amphiphilic extracellular material comprised of. This encapsulated mass represents a chronic non-neoplastic process and did not involve the joint or regional skeletal muscle.

Immunohistochemistry (IHC) to confirm the suspected diagnosis of T-cell-rich large B-cell lymphoma is recommended. Please call the ADDL if you would like IHC (CD20, CD3, and Pax5 on block 7) for an additional \$78.

Dilated axon myelin sheaths and infiltration by glial cells in the brain stem were rare. These changes were mild and the clinical significance of this lesion is unknown.

Necropsy Examination (3/5/2020)

Gross Findings:

A female Thoroughbred horse is in good body condition. Muscles of the left hip are moderately atrophied, and the left ischial wing is more prominent than the right. Within the subcutis of the left lateral thorax is a 2 cm in diameter, firm nodule which is tan on cut section. A similar subcutaneous nodule is on the medial aspect of the right thigh and measures 3 x 2 x 2 cm.

In the subcutis of the lateral aspect of the left hock and extending dorsally is a 12 x 8 x 2 cm, firm nodule. The nodule is encapsulated by a thick band of fibrous tissue. On cut section the nodule contains inspissated, gritty, yellow to brown, necrotic material (consistent with a chronic abscess).

Feed material is in the stomach. Light brown to green fluid digesta is in the small intestines. Brown, fluid digesta is in the large intestines. Firm, round, brown fecal balls are in the small colon.

Gross lesions are not present in the joints (left hip, stifle, hock, fetlock, interphalangeal, or right hip), pelvis (ischium, ilium, or pelvis), left hind hoof, bodies of the lumbar vertebrae, mouth, eyes, ears, brain, pituitary gland, trachea, esophagus, thyroid gland, heart, lungs, diaphragm, liver, spleen, cranial mesenteric artery, stomach, small intestines, pancreas, large intestines, adrenal glands, kidneys, urinary bladder, uterus, ovaries, sciatic nerve, or rib bone marrow.

Gross Diagnosis:

Subcutis of the left hind limb at the level of the hock: Chronic subcutaneous abscess
Subcutaneous nodules

Comment on Necropsy:

Final diagnosis pending results of histopathology and any ancillary testing.

Bacteriology by Dr. Kenitra Hendrix, Section Head

Animal ID	Specimen	Test Performed	Result	Isolate
Confession	Hock	Aerobic culture	no significant growth	

Additional tests requests must be received no more than 5 days after the identification of organisms.

Other Services

Animal for disposal ()