FORM-QA-13/2

2021 – 3839
Ref Vet: Cerrato, Shuna
Owner:
Breed:
Routed: Need Code hrd,n
03/17/21
form: 1 page

ONLINE ACCESSION FORM FOR GENERAL DIAGNOSTICS

Washington Animal Disease Diagnostic Laboratory

College of Veterinary Medicine, Washington State University
http://waddl.vetmed.wsu.edu

Clinic Information

Shuna Cerrato
Homespun Veterinary Services
4765 Park Acres Drive
Oak Harbor, WA 98277
Email: shuna.cerrato@gmail.com

ORDER ID:	12574
ACCT TYPE:	Refvet
SAMPLE COUNT:	1
DATE SUBMITTED:	03-16-2021

Animal Owner

Not provided

Animal Location

Same as owner address

Lab Samples

Specimen	Count	Lab	Collected
WBD	1	Necropsy	03-13-2021

Tests Requested

Tests Ordered	Test Count
Necropsy-Non commerial (pathology, Puyallup)	1

Species

Species	Breed	Age	Sex	Collected
Chicken	Malay	2 yrs	M	03-13-2021

General Info

No. in Group: 2 No. Dead: 1 No. Sick: 0 No. on Premises: 10 Duration of Problem: 1 days

Reason for Testing

General Diagnostics

Clinical Signs / Syndromes

Sudden Death

Additional History

This is a Malay, a very rare breed of chicken we are trying to preserve. We recently bought this rooster and a hen. Both seemed healthy, were eating well, active, normal. This rooster was suddenly found dead on Saturday 3/13/21. Had looked normal 2 hours prior. The hen is still fine. They have no contact with other animals. Sudden death like this is a relatively common occurrence in this breed.

Conditions Suspected

Heart issue? No strong suspicions re cause.

Comments

The carcass has been refrigerated since Saturday. We would like histopathology and toxicology as well as viral testing to determine the cause of death. Thank you!

Identification Sheet and Test(s)

#	ID	Specimen	Species	Sex	Collected	Tests
1	Malay rooster	Cadaver	Chicken (Malay) age: 2 yrs	M	03-13-2021	Necropsy-Non commerial (pathology, Puyallup)

Washington Animal Disease Diagnostic Lab

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Tel: (509) 335-9696 • Fax: (509) 335-7424

Shuna Cerrato
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Case#: **2021-3839**
Report Date: 19 Mar 2021
Received: 17 Mar 2021
Owner:
Animal:
Species: Chicken
Breed: Malay Chicken
Sex/Age: ,

Gross Pathology Report

PRIMARY GROSS DIAGNOSES:

1. Mitral valve dysplasia and endocardiosis, moderate
2. Cardiomegaly, diffuse, marked
3. Splenomegaly, diffuse, moderate with congestion

OTHER GROSS DIAGNOSIS:

1. Intestinal nematodiasis, regionally extensive, moderate; duodenum and proximal jejunum

GROSS DESCRIPTION:

A 4.4 kg adult intact male Malay rooster is necropsied on March 17, 2021. The cadaver is in good postmortem condition and good body condition based on adequate adipose tissue stores and normal skeletal muscle mass. No identifying markers, tags, or bands are present on the cadaver.

External exam: The comb, wattles, and skin surrounding the vent are bright red.

Heart: The heart weighs 46.9 g with the blood removed, which is approximately 1.0% of the total body weight. The right ventricular free wall is 0.3 cm thick, the left ventricular free wall is 1.0 cm thick, and the interventricular septum is 0.8 cm thick. The mitral valve is taunt, plicated, and transparent centrally

with 3 to 5, 0.1 to 0.2 cm diameter smooth, round, white to clear coalescing nodular thickenings on the free margin.

Spleen: The spleen is subjectively markedly enlarged, diffusely dark red, and oozes copious blood on cut section (congestion).

Intestines: The duodenum and proximal jejunum contain copious opaque, red, moderately viscous liquid digesta admixed with 20 to 30 pale tan, 0.1 cm diameter roundworms that range from 5.0 to 6.0 cm in length and have tapered ends. The duodenal and jejunal mucosa in this areas are red, and the colonic mucosa is mottled tan and red.

Lungs: The lungs are diffusely light red and well-aerated.

Tissues examined and considered free of significant gross lesions include the tongue, trachea, esophagus, kidneys, liver, gallbladder, testes, crop, proventriculus, ventriculus, pancreas, ileum, ceca, skeletal muscle, sciatic nerves, eyes, and brain.

COMMENTS: The heart is grossly enlarged in relation to the size of the carcass, and there is malformation of the mitral valve. Endocardiosis of the mitral valve has been described in some birds, including chickens, and can be linked to congestive heart failure. Splenic congestion in this case may be related to impaired cardiac function. No specific references to normal heart weights or cardiac abnormalities in Malay chickens could be identified through a literature search.The bird is in good body condition, indicating that the intestinal parasite infection was likely of minimal clinical significance. Histopathology is pending and will provide additional information.

Phone Contact: Dr. Drankhan left a voicemail for Dr. Cerrato on 3/18/21.

WORK PENDING: Histopathology

Pathologist: Dr. Holly Drankhan
Report authorized by: Dr. Danielle D. Nelson, Senior Pathologist

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Shuna Cerrato
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Case#: **2021-3839**
Report Date: 30 Mar 2021
Received: 17 Mar 2021
Owner:
Animal:
Species: Chicken
Breed: Malay Chicken
Sex/Age: ,

Histopathology Report

PRIMARY HISTOLOGIC DIAGNOSIS:

1. Disseminated lymphocytic proliferation, multifocal, moderate; sciatic nerves, brain, thyroid glands, ventriculus, esophagus, small intestine, comb, liver, spleen, kidney, heart, and arteries

OTHER HISTOLOGIC DIAGNOSES:

1. Myxomatous valvular degeneration, multifocal, chronic, moderate; mitral valve
2. Koilin degeneration, diffuse, moderate; ventriculus
3. Hepatic, splenic, and pulmonary congestion, multifocal, acute, moderate to marked
4. Intestinal ascaridiasis, mild
5. Silicosis, multifocal, chronic, mild; lungs

HISTOLOGIC DESCRIPTION:

Sciatic nerve: Large numbers of lymphocytes multifocally infiltrate and surround blood vessels within the epineurium of the sciatic nerves, and fewer infiltrate the perineurium and endoneurium. Lymphocytes are arranged in nodules and dense sheets supported by minimal fibrovascular stroma. Cells are round with a moderate amount of eosinophilic cytoplasm and distinct cell borders. Nuclei are small,

centrally to eccentrically located, and round to oval with coarse chromatin and indistinct nucleoli. Anisocytosis and anisokaryosis are moderate. There are no mitotic figures in four examined 400x fields. Lymphocytes are frequently necrotic with hypereosinophilic cytoplasm and karyorrhectic nuclei.

Similar lymphocytes also multifocally expand the Virchow-Robins spaces of frequent blood vessels within the meninges and brain. Degenerate lymphocytes also form infiltrative sheets and nodules within the thyroid glands, submucosal esophageal glands, lamina propria and muscularis externa of the small intestines, and dermis and submucosa of the comb. There are few multifocal perivascular infiltrates of similar lymphocytes in the liver, spleen, and renal interstitium and low numbers infiltrating between cardiomyocytes.

Ventriculus: The mucosa is multifocally infiltrated by large numbers of degenerate lymphocytes similar to those described in the sciatic nerve that efface the mucosal glands. Few remaining glands adjacent to these infiltrates are moderately distended by homogeneous, eosinophilic secretory material admixed with few heterophils and lined by variably attenuated epithelium. The koilin layer ivaries from glassy and pale eosinophilic to fibrillar and brightly eosinophilic. There is also fragmentation of the koilin and separation by clusters of extravasated erythrocytes and degenerate cells.

Blood vessels: In multiple medium to large caliber arteries within the myocardium, the subintima and to a lesser extent the tunica media and adventitia are infiltrated by low numbers of degenerate lymphocytes similar to those described in the sciatic nerve. Smooth muscle cells in these layers are multifocally vacuolated. Similar changes are seen in blood vessels within the muscularis externa and serosa of the ventriculus.

Heart: The mitral valve is expanded by multiple coalescing nodules of pale eosinophilic myxomatous matrix.

Comb skin: Superficial dermal blood vessels are frequently distended by erythrocytes (congestion), and the dermis is multifocally expanded by clear space (edema).

Tongue and esophagus: The lingual and esophageal epithelium are covered by flakes of nucleated and anucleate keratin that are separated by colonies of moderate numbers of cocci and fragments of refractile, birefringent plant material.

Jejunum: In one cross section of the small intestine, the lumen contains two sagittal sections of 250-350 μm diameter adult nematode parasites that have a pseudocoelom lined by coelomyarian musculature with lateral cords and an outer cuticle with lateral alae. The pseudocoelom contains uteri filled with thick-shelled eggs and an intestine lined by uninucleate columnar cells with a low brush border.

Lung: Multifocal clusters of moderate numbers of macrophages adjacent to parabronchi contain intracytoplasmic brown, granular debris and irregular clear, refractile, and birefringent debris.

Tissues examined and considered free of significant histologic lesions include trachea, skeletal muscle, pancreas, crop, proventriculus, duodenum, colon, thymus, bone marrow, and eye.

Histopathology Report

COMMENTS: This chicken has lymphoproliferation in multiple tissues including the sciatic nerves, brain, and skin, consistent with Marek's disease. Marek's disease is caused by the highly-contagious gallid herpesvirus-2, which is transmitted by infected chickens in feather dander. The disease can manifest in many ways, including skin lesions, paralysis, tumor formation and/or ocular changes. Marek's disease is difficult to eradicate from infected flocks, and vaccination and good biosecurity practices are the best means of control. Vaccination of 18-day-old embryos or new hatchlings is most effective. Vaccinated birds may still become infected, but appropriately timed immunization limits clinical disease.

Koilin degeneration and the changes in the tongue and esophagus are suggestive of decreased feed intake, likely secondary to systemic Marek's disease. Histopathology confirms the presence of mitral valve endocardiosis, but there are no degenerative changes in the myocardium. The histologic features of the intestinal parasites are most consistent with ascarids; in this case, the lack of associated enteritis and good body condition of the animal support that the parasite infection was of minimal clinical significance.

Phone Contact: Dr. Drankhan left a voicemail for Shuna Cerrato on the afternoon of 3/29/21.

WORK PENDING: None

Pathologist: Dr. Holly Drankhan
Report authorized by: Dr. Danielle D. Nelson, Senior Pathologist

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Dr. Shuna Cerrato
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Case#: 2021-3839
Report Date: 03/30/21

Submittal Date: 03/17/21	Species: Chicken	Age:
Owner:	Breed: Malay Chicken	Sex:

Final Report:

Histopathology- Reported on 03/30/21

Histo-WADDL necropsy (Ag) : SOP-QA-63

Animal	Specimen	Result
	Cadaver	Reported separately

Previously reported results:

Pathology- Last reported on 03/19/21

Necropsy : SOP-QA-63

Animal	Specimen	Result
	Cadaver	Reported separately