

Diagnostic Exercise

From The Davis-Thompson Foundation*

Case #: 133 Month: November Year: 2019

Answer Sheet

Contributor: Francisco A. Uzal, California Animal Health and Food Safety Laboratory System, San Bernardino Branch, University of California – Davis.

Clinical History: A 7-year-old, male reindeer from a zoo collection, with a history of neurologic signs (head tilt, circling and lack of vision), nasal discharge and anorexia for 3 days. Euthanasia was performed.

Necropsy Findings:



Figure 1



Figure 2

Morphologic Diagnosis: Rumenitis, necrotizing, focally extensive and transmural, with necrotizing vasculitis, thrombosis, and infarction

Etiology: Zygomycetes

Condition: Mycotic rumenitis

Pathogenesis and Discussion: Several zygomycetes are normal inhabitants of the forestomachs of ruminants. When acidosis associated mostly with high carbohydrate diet occurs, the reduction of the rumen pH causes inflammation and ulceration of the forestomach mucosa. This allows invasion of the submucosa by fungi, mainly zygomycetes, which have special predilection for blood vessels, causing necrotizing vasculitis, thrombosis and infarction. Mycotic infection of the forestomachs may also occur in the absence of acidosis, secondary to sepsis, abomasal reflux, antibiotic administration, and bovine viral diarrhea virus infection. Lesions are most frequently seen in the rumen, reticulum and omasum, but occasionally spread to other organs occur. In this case, the reindeer had lesions in the liver, brain and nasal cavity, which explains the neurological and respiratory signs observed.

Reference: Uzal FA, Hostetter J & Plattner B. 2016. Alimentary system. In: Jubb, Kennedy and Palmer's Pathology of Domestic Animals. 6th Edition. Grant Maxie editor. Elsevier, Ames, IO, pp. 1-257.

*The Diagnostic Exercises are an initiative of the **Latin Comparative Pathology Group (LCPG)**, the Latin American subdivision of The Davis-Thompson Foundation. These exercises are contributed by members and non-members from any country of residence. Consider submitting an exercise! A final document containing this material with answers and a brief discussion will be posted on the CL Davis website (http://www.cldavis.org/diagnostic_exercises.html).

Editor-in-chief: Vinicius Carreira

Associate Editor for this Diagnostic Exercise: Francisco Uzal

L
C
P
G

