



Diagnostic Exercise

From The Davis-Thompson Foundation*

Question sheet

Case #: **199**; Month: **October**; Year: **2022**

Contributors: Ji-Hang Yin¹, DVM, MS; Rachel Neto¹, DVM, MS, DACVP; Russell Cattley¹, VMD, PhD, DACVP, FIATP.

¹Department of Pathobiology, College of Veterinary Medicine, Auburn University, Auburn, AL 36849 e-mail jzy0089@auburn

Clinical History: A 5-month-old, female intact, Katahdin sheep presented to Large Animal Teaching Hospital at Auburn University for a 24-hour history of abnormal neurologic status including opisthotonos, severe ataxia, and abnormal mentation. Heat stress was suspected by the owner, and unspecified medication was given. Given the lack of responsiveness and poor prognosis, the animal was humanely euthanized.

Clinical Pathology Findings: Hematology results revealed a mild anemia with evidence of strong regeneration and many ghost cells, mild to moderate leukocytosis with neutrophilia, and marked thrombocytosis. Intravascular hemolysis was suspected based on these findings. Other biochemical results were aspartate aminotransferase of 1339 U/L (normal interval range: 75-339 U/L), creatine kinase of 5340 U/L (normal interval range: 100-547 U/L), blood urea nitrogen of 86.4 mg/dL (normal interval range: 19-37 mg/ dL), creatinine of 8.6 mg/dL (normal interval range: 0.8-1.3 mg/ dL), and hemolysis index of 1113. The normal interval range is referred to Clinical Chemistry Reference Intervals in UCDAVIS veterinary medicine.

Necropsy Findings: Major gross findings are as follows: The visceral adipose tissue was diffusely pale tan to yellow (icterus). The liver was diffusely dark orange to dark brown (Fig. 1A). The gallbladder was enlarged and distended by bile. Bilaterally, the renal cortex and medulla were diffusely dark brown to black (Fig. 1B). Filling the urinary bladder was approximately 30 mL dark brown urine with numerous fine dark green to brown granules.

Gross Images:



Figure 1

Follow-up Questions:

- *Morphologic diagnosi(e)s*
- *Potential etiology*
- *Name of the disease*

*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).

Associate Editor for this Diagnostic Exercise: Saulo Pavarini

Editor-in-chief: Claudio Barros