[redacted]

ACCESSION NUMBER [redacted]
ACCOUNT NUMBER [redacted]

Testing Lab: [redacted]
Case Coordinator(s): [redacted]

Client: [redacted]

Date Received: 01/27/2021
Report Date: 01/27/2021

FINAL REPORT

Medical History

Medical history on file.

Animal ID: [redacted] Sloth :: NFS / Male / 3 years / 5.5 kg

Necropsy

Test: Necropsy - Small Mammals Sample: Animal :: Body Collection date: 01/26/2021

Report

Necropsy Findings

Animal Identification and External Exam: A 9.38 lb., 3-year-old, female three-toed sloth (*Bradypus* sp.) in poor body condition and moderate autolysis is submitted for necropsy. The mucous membranes are diffusely pale (anemia). Diffusely, the axial and appendicular subcutis is expanded by a small to moderate amount of clear gelatinous fluid (edema).
Musculoskeletal System: The axial and appendicular skeletal muscles are diffusely atrophic.
Respiratory System: The right middle lung lobe is expanded and firm. In cut surface, purulent exudate is noted in the bronchi (suppurative bronchopneumonia). Multiple white pinpoint foci are noted along the visceral pleura in the cranial and caudal lung lobes (lipid pneumonia and calcification, presumed). A small to moderate amount of frothy fluid is within the trachea and bronchi (edema). Multifocally, primarily in the left and right lung lobes, there is subpleural and interlobular emphysema. A small amount of clear fluid (hydrothorax) is within the thoracic cavity.
Circulatory System: The pericardial sac has increased clear fluid (hydropericardium).
Digestive System: The stomach is diffusely dilated and filled with abundant, slightly dry mixed plant-based gastric contents. The mucosa at the glandular region is thickened (up to 3 mm-depth), has a granular white appearance with gritty consistency (proliferative gastritis with mineralization) and multifocal erosions. Multifocal, slightly demarcated depressed foci (erosive glossitis) is noted on the dorsal surface of the tongue. Multifocally, the small intestine is dilated and filled with brown fluid. Fecal staining is noted in the perineal area along with caudal limbs.
Hepatobiliary System: The liver lobes are slightly swollen, dark brown and have enhanced reticular pattern.
Hemolymphatic System: No significant findings observed (NSFO).
Urinary System: Bilaterally, the renal cortex and outer medulla are dark, firm and have a subtle pale tan tubulointerstitial pattern. The renal capsule was difficult to remove and adhesions to the cortex surface were common.
Reproductive System: NSFO.
Endocrine System: NSFO.
Special Senses: The eyes are sunken.
Nervous System: NSFO

Necropsy Diagnosis

1) Chronic gastritis with mineralization;
2) Gastric dilatation;
3) Chronic renal disease;
4) Cachexia;
5) Suppurative pneumonia;

6) Enteritis.

Comments

This is an intersting case. The main gross pathologic findings are: a) chronic gastritis with mineralization; b) gastric dilatation; c) chronic renal disease; d) cachexia; e) suppurative bronchopneumonia; and f) enteritis. The exact cause of these changes are uncertain at this point. Specifically, the gastric mineralization has been previously described in captive 2-toed sloths and could possibly relate to dietary vitamin D or calcium and phosphorus imbalances and renal disease. Chronic gastrointestinal disease and renal disease could explain cachexia and generalized edema. Histologic examination is highly recommended in this case. Please let us know whether you would like us to perform this analysis. The severity and extent of these lesions could explain the clinical signs and death in this case.

- Han, S., & Garner, M. M. (2016). Soft tissue mineralization in captive 2-toed sloths. *Veterinary pathology*, *53*(3), 659-665.
- Arenales, A., Silva, F. L., Miranda, F., Guedes, P. E. B., Werther, K., da Costa, M. E. L. T., ... & Santos, R. L. (2020). Pathologic findings in 36 sloths from Brazil. *Journal of Zoo and Wildlife Medicine*, *51*(3), 672-677.

Sets of fresh and formalin-fixed tissues were collected during necropsy. Starting from the day the case is received, the set of fresh tissue is retained for approximately 14 days and the formalin-fixed tissue is retained for approximately 21 days. If additional testing not requested in the submittal form is desired, please contact the laboratory within the time outlined above.

Authorized by: [redacted]