



HISTORY: This 1-year-old male two-toed sloth had a one-month history of intermittent twitching, weakness, and inappetence and had received various forms of supportive care with varying response. The sloth subsequently died.

CLINICAL DIAGNOSIS: Open.

GROSS: Received in formalin are 13 tissues to 5 cm. in greatest dimension that are processed in six blocks.

MICROSCOPIC: **Heart:** Acute moderate myocardial necrosis is noted. **Kidney:** Acute marked renal tubular necrosis is noted, and tubules occasionally contain proteinaceous material, hemoglobin, or tubular epithelial intracytoplasmic eosinophilic globules (hemoglobin nephrosis). **Liver:** Moderate to marked, centrilobular, hepatocellular vacuolar degeneration is noted, and some erythrophagocytosis is also present in the sinusoids in the centrilobular regions. **Adrenal glands:** Both adrenal glands have multiple small foci of hemorrhage and fibrin deposition or fibrin thrombosis in the cortex and medulla. **Colon:** The lumen of the colon is filled with frank blood. **Stomach:** Numerous erosions are in the fundus of the stomach. **Brain:** The meninges of the cerebellum have a focus of hemorrhage and thrombosis. The following tissues are histologically within normal limits: lymph node, adipose, one section of large intestine, small intestine, testicle (inactive), cerebellum, brainstem, midbrain, hippocampus, and cerebrum.

HISTOPATHOLOGIC DIAGNOSIS:

1. Moderate acute myocardial necrosis.
2. Marked hemoglobin nephrosis.
3. Marked centrilobular hepatocellular vacuolar degeneration and necrosis.
4. Acute thrombosis with hemorrhage, adrenals.
5. Melena, colon.
6. Multiple erosions, fundus.
7. Acute thrombosis with hemorrhage, meninges in region of cerebellum.

COMMENT: Histologic findings are consistent with intravascular hemolysis, DIC, and subsequent necrosis associated with hypoxia in the kidney, liver, and heart. The inciting cause is not apparent in the submitted tissues, and no infectious agents or viral inclusions were seen. Skeletal muscle and lung were not in the submitted tissue set, but there may have been lesions in these tissues as well based on the

history. The cause for the twitching behavior is not apparent histologically in the submitted tissue set. This animal may have had some form of innate metabolic derangement.

