

Case 2 – 24-632:

Signalment and history: A 2-year-old, female Albino Boa Constrictor is presented for necropsy at NDSU VDL. The client has lost 6 other boa constrictors (all less than 2 years of age).

Gross findings: The animal weighs 0.6kg and has a slim body condition score with a slim, slightly wrinkled neck and visible spine. The animal is 109cm long from nose to the tip of the tail. The oral cavity has a large amount of thick, clear, viscous fluid. Throughout the esophagus and stomach is a similar consistency of fluid. Within the distal esophagus and stomach are multiple, dark red, flat foci. There are no other significant lesions found on gross examination.

Histology: Liver: In hepatocytes and bile epithelium there are one to numerous, 3-10 micron, intracytoplasmic, brightly eosinophilic inclusion bodies. Scattered throughout are random, degenerate and necrotic hepatocytes. There are increased numbers of eosinophils, heterophils, and lymphocytes within the sinusoids.

Stomach: There are similar intracytoplasmic inclusion bodies scattered throughout the epithelial cells of the mucosa.

Diagnosis: Liver and stomach: eosinophilic intracytoplasmic inclusion bodies

Condition: Boid inclusion body disease

Comments: Both the liver and stomach are similar intracytoplasmic, brightly eosinophilic inclusion bodies that are consistent with boid inclusion body disease (**IBD**). These viral inclusions were observed in other tissues not submitted (kidney, esophagus, nasal mucosa, and neurons). This disease is caused by an arenavirus that is transmissible and progressively fatal. This disease is almost exclusively in captive boids (boas and pythons) but does present differently in each species. In pythons, this disease is most commonly a rapid progression with neurological clinical signs, and inclusion bodies only observed in the central nervous system (CNS). In boids, IBD is a more chronic manifestation and inclusion bodies are observed in multiple organs, as seen in this case.

Secondary bacterial diseases are frequently encountered, as in this case, in the heart, esophagus, and surrounding the thyroid. In boids, common clinical findings include chronic regurgitation, and central nervous system abnormalities. There is no treatment. This is the most likely diagnosis for the boids that had previously passed away (per submission form).

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References:

Terio, Karen A., Denise McAloose, and Judy St. Leger, eds. 2017. Pathology of Wildlife and Zoo Animals. San Diego, CA: Academic Press