NPMS 2023, Case # 1

Authors: Lydia M. Hall, DVM; Jaime Landolfi, DVM, PhD, DACVP

History/Signalment: 42-year-old, male silverback gorilla (Gorilla gorilla) in managed care at a U.S. zoological institution. This individual had been clinically managed for multiple mild chronic-degenerative/age-related diseases including osteoarthritis, sinusitis related to nasal mites, and subclinical bilateral atrioventricular valvular insufficiency and atrial enlargement. He was housed with multiple conspecifics in an indoor exhibit who were all offered a similar diet with no recent novel enrichment items. In the summer of 2022, he presented to the veterinary team with a 1-day history of lethargy, cough, and hyporexia. Over the next 48-hours, he developed profuse mucoid nasal discharge, became minimally responsive, and began to show tremors of the hands and head. No other co-housed conspecifics were affected. During darting for emergent care, he became unresponsive with cardiopulmonary arrest within minutes. Resuscitative efforts were ineffective, and he was submitted for necropsy examination.

Gross: Relevant gross findings were minimal and included mild laryngeal air sacculitis, bilateral rhinitis, and thoracopulmonary changes including hemorrhage and congestion. At the time of gross exam, lung changes were attributed to terminal trauma associated with cardiopulmonary resuscitation attempts. Additionally, this individual also had mild to moderate musculoskeletal and cardiovascular changes consistent with clinically managed disease and geriatric status. No gross lesions were detected in the central nervous system.
2023 NPMS Case 2

Authors: Gayle C. Johnson, DVM, DACVP, PhD (University of Missouri); Chris Levine, DVM, DACVIM (Neurology); Levine Veterinary Neurology, Bradenton, FL

**History/Signalment:** Stanley, a 7-month-old, neutered male Jack Russell Terrier cross, was presented for evaluation of an acute onset of cluster seizures and a chronic history of left sided circling. About 3 months ago, Stanley was adopted with a similar prior history, but improved in his new home. On the day of presentation, Stanley experienced cluster seizures that consisted of full body convulsing and vocalizing (a total of 20 seizures, each lasting about 2-3 minutes). Stanley had a hypermetric gait, compulsive left-sided circling, and an absent menace response bilaterally. There was anisocoria present with the left pupil larger than the right. A cisternal CSF sample revealed low grade mixed inflammation. MRI images are shown. A postsurgical biopsy was submitted.
Authors: Anna Flocken, DVM (Cummings School of Veterinary Medicine at Tufts University & New Hampshire Veterinary Diagnostic Laboratory); Jacqueline Marr, DVM, DACVP (New Hampshire Veterinary Diagnostic Laboratory)

History/Signalment: A 3.25-year-old, female spayed Brittany dog with acute hindlimb proprioceptive deficits. Irregular L1-L2 vertebrae were noted on radiographs at the rDVM. MRI revealed a hyperenhancing intramedullary spinal cord lesion at the level of the L1 vertebra, and suspected protrusion of the T13-L1 intervertebral disc (image below).

Gross Pathology: Within the spinal cord at the level of L1, a soft, light tan, ovoid, 1.5 cm diameter mass expands and effaces the neuroparenchyma.
NPMS 2023, Case #4

Authors: Mohamed Issam Atmane¹, DVM, Dipl. ACVP (Anatomic); Rodolfo J. Ricart Arbona², DVM, MLAS, DACLAM; Ileana C. Miranda¹,², DVM, MSc, Dipl. ACVP (Anatomic)

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History/Signalment: Five 1.5-month-old intact female NOD.Cg-Prkdc<sup>scid</sup> Ili2rg<sup>min/WjL</sup>/SzJ (NSG) mice were subcutaneously engrafted in the right flank with a human pancreatic tumor patient-derived xenograft (PDX). Approximately 2 months later, 2/5 mice, including the current case, presented with sudden bilateral hind limb paralysis and were euthanized by CO₂ overdose. Terminal blood was collected via cardiac puncture for complete blood count and serum chemistry analyses, and complete necropsies with histopathology examination were performed.

Gross findings: The nutritional condition was underconditioned (body condition score: 2/5; body weight: 18.491 g). The right flank had a 1.3 x 0.5 x 0.3 cm, white, soft, and homogeneous subcutaneous mass (xenograft tumor).
NPMS 2023, Case #5

Authors: Samantha Kovacs, DVM, PhD (UC Davis); Eunju (April) Choi DVM, PhD, Dipl. ACVP (UC Davis), Andrew D. Miller, DVM Dipl. ACVP (Cornell University); Kevin Woolard DVM, PhD, Dipl. ACVP (UC Davis)

History/Signalment: 1.5-year-old male-intact standard poodle mix. 5 days prior to presentation developed a head tilt and circled to the right. 3 days prior: progressed to falling to the right with decrease sensation in pelvic limbs. 1 day prior: laterally recumbent, could not lift head, obtunded, with apneustic respiration. Neuroexamination revealed non-ambulatory tetraparetic, head tilt to the right, horizontal nystagmus with fast phase to the right consistent with central paradoxical vestibular dysfunction. MRI revealed an extensive T2-weighted hyperintense mass that spanned from the right side of mid-brain, through the petro-occipital fissure, along the right carotid artery, and down into the thoracic inlet. The mass was causing severe right sided compression of the brainstem, spinomedullary junction, and cerebellum.

Gross findings: Extending from the first branch of the aorta cranially into the calvarium is a linear, multinodular, pale tan to grey, semi-firm mass that passes through the cranial mesenteric ganglion, right thoracic inlet, jugular foramen and hypoglossal canal into the skull. It severely compresses the brainstem and cerebellum and communicates with the 4th ventricle. It expands and effaces the vagosympathetic trunk but does not invade the right carotid. On section, the mass has multifocal hemorrhage and pale tan firm granules (mineralization). It is 2cm wide at the largest diameter.
NPMS 2023, Case #6

**Authors:** Allison Gerras DVM (Michigan State University) and Dalen Agnew DVM, PhD, DACVP (Michigan State University)

**History/Signalment:** This 3-year-old River Vine Snake was submitted to the Michigan State University Veterinary Diagnostic Laboratory with a history of subcutaneous parasites. This snake was captive bred at an Association of Zoos and Aquariums (AZA) accredited aquarium. River Vine Snakes are terrestrial snakes indigenous to mangroves and tidal rivers along the coast of Myanmar. Their diet is composed entirely of fish.

**Gross findings:** No gross lesions were recorded at the time of postmortem examination.

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