

**ZOOLOGICAL PATHOLOGY PROGRAM
STRANDED CETACEAN NECROPSY REPORT**

Field ID: SDD -20100905-LA003
Additional Identifier: LA 408
ZPP Accession Number: 11-09Tt
Species: *Tursiops truncatus*
Strand Date: 09/05/10
Strand Location: Grand Isle, LA
Sex: Female
Age Class: yearling
Necropsy Date: 9/8/10
Condition code: 2
Total Length: 188 cm
Weight:
Blubber Depth: 11 mm
Body Condition: 4 out of 7

Gross Necropsy: Report on file.

Findings include (from gross necropsy report):

Lungs: L lung was taut to the touch (inflated?) and nodular. Cranio-ventral margins were thin and undeveloped (typical character of juvenile of this species?). Pleural surface of lung was homogeneously pink- red. Along the dorsal mid-line, pleural surface was greenish in color (decomposition). Upon cut, parenchyma was homogeneously beige pink. Upon cut of nodules - light load, caseous encased lung worm. R lung similar to L lung. Both lungs had a light load of active lung worm

Main Stomach: Light load of Braunina. Contained small amount of brownish fluid.

Pyloric Stomach: Light load of Braunina. Contained fish eyeballs. One volcanic-like ulcer, approximately 1 x1cm in size.

Intestine: Serosal surface of the proximal intestine had multiple raised, circular nodules, approximately 1mm in size. Upon cut of this region, mucosa was focally pink in color but nodules did not perforate wall. Proximal intestine contained a small amount of cream-yellow fluid. and a light load of active nematodes. Colon contained small amount of sandy, yellow-cream viscous fluid. Most intestines missing except for a very small portion of proximal intestine and colon.

Liver: Firm to the touch. Serosal surface homogeneously purple in color. Upon cut, parenchyma was heterogeneously speckled blackish-brown. Endothelial lining of blood vessels were hypertrophied/ thickened.

Slides/Tissues Received: 21 regular slides, 1 large slide

Microscopic Findings:

Slide 1:

Kidney: No significant findings (NSF)

Slide 2:

Adrenal glands: NSF

Nerve plexus and connective tissue: NSF

Slide 3:

Lung: Multifocally, several bronchioles and alveolar spaces contain small aggregates of up to 800 micron diameter nematodes. Parasites have an eosinophilic cuticle, coelomyarian musculature, large lateral cords, a coelom, and an intestinal tract composed of few cells. Parasites are often surrounded by moderate numbers of neutrophils, fewer eosinophils, and variable amounts of necrotic debris that sometimes obscures epithelium. In one dilated bronchiole containing a cluster of larger parasites is surrounded by neutrophils, attenuated respiratory epithelium, moderate amounts of fibrous connective tissue, and moderate numbers of lymphocytes and macrophages. Several bronchioles and alveolar spaces without parasites contain moderate numbers of neutrophils, necrotic debris and occasional macrophages. There are scattered small aggregates of macrophages, lymphocytes and fewer neutrophils in alveolar septae adjacent to parasite clusters. Regionally, alveolar spaces are filled with pale basophilic mucinous material and a few macrophages.

Diaphragm: NSF

Slide 4:

Spleen: There are many moderate to large lymphoid follicles in the white pulp. The red pulp contains moderate numbers of erythroid and myeloid precursors and megakaryocytes (extramedullary hematopoiesis). The red pulp also contains small to moderate numbers of macrophages containing dark brown, stippled cytoplasmic material (probable acid hematin).

Liver: Portal triads are surrounded by moderate amounts of fibrous connective tissue that sometimes bridges between portal areas. There are mildly increased bile ductule profiles and small numbers of lymphocytes and plasma cells within the fibrous connective tissue.

Slide 5:

Trachea: Mucosal epithelium is segmentally absent or sloughed (post mortem artifact). The submucosa contains small numbers of macrophage and lymphocytes.

Heart: NSF

Slide 6:

Heart: NSF

Slide 7:

Lymph node: Sinuses contain small to moderate numbers of neutrophils.

Lymph node: There is moderate lymphoid hyperplasia

Slide 8:

Lymph node: Sinuses contain small to moderate numbers of eosinophils.

Skeletal muscle: NSF

Slide 9:

Intestine: NSF

Pancreas: NSF

Pancreatic lymph node: Sinuses contain small numbers of eosinophils and macrophages.

Duodenum: NSF

Slide 10:

Pylorus: The lumen contains several up to 1.5 mm dorsoventrally flattened trematodes. The submucosa contains a few scattered small nodular aggregates of lymphocytes and a small accumulation of bright eosinophilic necrotic debris surrounded by a few macrophages.

Slide 11:

Stomach, glandular portion: See description under slide 10.

Slide 12:

Intestine: NSF

Stomach, squamous portion: There is mild multifocal retention of superficial epithelium

Slide 13:

Colon: NSF

Lymph node: NSF

Slide 14:

Skeletal muscle: NSF

Lymph node: Sinuses contain small numbers of eosinophils

Slide 15:

Skin and blubber: NSF

Slides 16 - 18:

Cerebrum: NSF

Slide 19:

Cerebellum: NSF

Slide 20:

Pons: NSF

Slide 21:

Spinal cord: NSF

Brain stem: NSF

Slide 22:

Eye: NSF

Final Diagnoses:

- 1) Lung: Mild to moderate multifocal neutrophilic and granulomatous bronchopneumonia with intralesional metastrongyles (gross and histologic diagnoses)
- 2) Trachea: Mild histiocytic and lymphocytic tracheitis
- 3) Lymph nodes (multiple, pancreatic lymph node and sites unspecified): Mild to moderate eosinophilia
- 4) Spleen: Marked lymphoid hyperplasia and mild extramedullary hematopoiesis
- 5) Lymph node: Moderate lymphoid hyperplasia
- 6) Liver: Moderate portal fibrosis and mild biliary hyperplasia
- 7) Glandular stomach: Mild trematodiasis (*Braunia* sp., presumed; gross and histologic diagnoses)

Ancillary Test Results: None available at time of report.

Comments:

The cause of death was not evident in the slides examined histologically. The verminous pneumonia within the lungs noted both on gross and histologic examination was not deemed severe enough to have caused significant debilitation. The lungworm burden was within acceptable limits for a young free-ranging dolphin.

There was also mild gastric parasitism, again within acceptable limits for a young free-ranging dolphin.

The lymph node and spleen changes were likely a reaction to parasitism. Portal fibrosis is a common finding in dolphins from this region and was considered an incidental finding.

Reported By:

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