

**ZOOLOGICAL PATHOLOGY PROGRAM
STRANDED CETACEAN NECROPSY REPORT**

Field ID: 68IMMS070510
Additional Identifier: D-0020, 10-262C
ZPP Accession Number: 11-058Tt
Species: *Tursiops truncatus*
Strand Date: 07-05-10
Strand Location: Pass Christian, MS
Sex: female
Age Class: Adult
Necropsy Date: 07-05-10
Condition code: 3
Total Length: 229 cm
Weight:
Blubber Depth:
Body Condition:

Gross Necropsy: Oiled marine mammal report available.

Slides/Tissues Received: 22 regular slides.

Microscopic Findings: Autolysis is moderate to severe, impeding interpretation and occasional tissue identification; also widespread colonization by large numbers of postmortem bacteria.

Slide 1:

Lymph node: Scattered about the subcapsular sinus and cortex are low numbers of neutrophils and lesser eosinophils. Medullary sinuses contain low to moderate numbers of erythrocytes.

Second lymph node: Sinuses contain large numbers of erythrocytes as well as mildly increased numbers of macrophages (histiocytosis). Most macrophages contain phagocytosed debris and or erythrocytes (erythrophagocytosis).

Slide 2:

Brain: No significant findings (NSF)

Slide 3:

Brain: NSF

Slide 4:

Brain: NSF

Slide 5:

Brain: NSF

Slide 6:

Brain: NSF

Slide 7:

Brain: A rare vessel is cuffed by rare to few plasma cells and macrophages containing golden-tan pigment.

Slide 8:

Brain: NSF

Slide 9:

Brain: NSF

Slide 10:

Spinal Cord: NSF

Liver: NSF

Heart: NSF

Unknown tissue: NSF

Slide 11:

Lymph node: Sinuses contain low numbers of neutrophils and low to moderate numbers of macrophages containing tan granular pigment.

Slide 12:

Brain: NSF

Skeletal muscle (2 sections): NSF

Glandular organ, rule out pituitary: NSF

Slide 13:

Lung: A large bronchus lumen contains several large necrotic nematodes surrounded by moderate numbers of neutrophils and lesser macrophages, eosinophils and a few lymphocytes. Most of the epithelium is absent (ulceration) with few small remnants composed of cuboidal to polygonal cells with large vesicular nuclei. The submucosa and peribronchial interstitium have moderately increased quantities of mature fibrous tissue containing large numbers of lymphocytes, plasma cells, macrophages, and neutrophils with lesser eosinophils. Some lymphocytes are in dense follicle-like aggregates. Cartilages are widely separated within the fibrous tissue. Other bronchi and bronchioles have similar fibrosis with attenuated or obliterated lumens but with lesser inflammation. Often alveolar septa adjacent to, or intervening between affected airways have mildly increased fibrous stroma; alveoli are filled with eosinophilic (proteinic) material with few neutrophils and or macrophages. The pleura has a diffuse moderate increase in fibrous tissue with moderately increased numbers of thick-walled vessels. Small to

moderate-sized nodular aggregates of similar vessels and surrounding fibrous tissue are randomly scattered about the parenchyma.

Second section of lung: The pleura contains moderate numbers of neutrophils and eosinophils. There are similar, though lesser, bronchial and alveolar changes.

Slide 14:

(Presumed) vagina: NSF

Tongue: NSF

Luminal organ (possible/probable bladder): NSF

Unknown organ: NSF

Slide 15:

Pancreas: NSF

Brain: NSF

Slide 16:

Lymph node: NSF

Heart: NSF

Cervix (presumptive): NSF

Slide 17:

Lung: There are moderately severe lungworm changes as for slide 13. The section is small, composed of one airway and scant surrounding parenchyma.

Connective tissue, rule out cardiac valve: NSF

Non-glandular stomach: NSF

Great vessel: NSF

Intestine: NSF

Slide 18:

Mammary gland (active): NSF

Trachea: Diffusely the submucosa contains low numbers of lymphocytes, plasma cells and rare neutrophils. Submucosal vessels are markedly congested.

Slide 19:

Luminal organ: NSF

Kidney: NSF

Intestine/Stomach: NSF

Slide 20:

Skin with blubber: A band of deep stratum spinosum cells across the section have mild to moderate intracellular edema (possible artifact).

Slide 21:

Eye: NSF

Slide 22:

Eye: NSF

Final Diagnoses:

1. Victim of trauma (per gross report)
2. Mild lymph node sinus histiocytosis with erythrophagocytosis
3. Moderate, multifocal, chronic and active bronchopneumonia with intralesional viable and necrotic nematodes
4. Mild to moderate, multifocal, pulmonary angiomas
5. Marked tracheal submucosal congestion

Comments:

Given gross findings of hemorrhagic cervical muscle combined with histologic evidence of lymph node drainage of hemorrhage with resultant histiocytosis and erythrophagocytosis, this animal sustained traumatic injury several days prior to demise: Trauma was considered a major contributing factor in this mortality.

Abundant absent teeth and few perivascular pigmented macrophages in the brain were consistent with this being an older animal. Age combined with stressors/increased metabolic demands of recent parturition and lactation may have contributed to demise by rendering this individual less able to recover from traumatic insult. Interestingly, this animal, while older, had ongoing lungworm lesions. Generally, active lungworm infection is scant/absent in older animals. Presence of moderate, active lungworm infection suggested age-associated declining condition could have lessened ability to ward off infection. Alternatively this may have reflected parasite recrudescence associated with pregnancy (so parasite can be transmitted to fetus/neonate), though this remains speculative. Lungworm infection in and of itself was likely of minimal clinical significance.

Reported By:

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July 02, 2012