ZOOLOGICAL PATHOLOGY PROGRAM
STRANDED CETACEAN NECROPSY REPORT

Field ID: MCT20110325-LA001
Additional Identifier: LA-492
ZPP Accession Number: 11-063Tt
Species: *Tursiops truncatus*
Strand Date: 03-25-11
Strand Location: Venice, LA
Sex: female
Age Class: Adult
Necropsy Date: 03-25-11
Condition code: 2
Total Length: 193 cm
Weight:
Blubber Depth:
Body Condition:

Gross Necropsy: Gross report available.

Slides/Tissues Received: 22 regular slides & one oversized slide.

Microscopic Findings: Autolysis is moderate; Some colonization by postmortem bacteria.

Slide 1:
Kidney: No Significant Findings (NSF)

Skeletal muscle: There is diffuse, severe hemorrhage.

Slide 2:
Tracheobronchial lymph node (per trim form): Sinuses contain low to moderate numbers of neutrophils, eosinophils and mildly increased numbers of macrophages.

Lung (2 sections): In one section scattered alveoli contain few to moderate numbers of macrophages; few macrophages contain 1-2 discrete, colorless vacuoles. One bronchus has a large adjacent lymphofollicular aggregate (BALT hyperplasia). In the second section of lung, a moderate-sized region encompassing several bronchioles and surrounding alveoli has loss of differential staining but maintains normal architecture (coagulative necrosis), delineated by extensive inflammation. Within the zone of necrosis are large numbers of necrotic neutrophils and scattered extravasated erythrocytes. Immediately surrounding is a thin, discrete band of macrophages with lesser neutrophils and eosinophils. These cells are further circumscribed by a thick region with marked interstitial accumulations of lymphocytes, plasma cells, macrophages, eosinophils and neutrophils, with lesser numbers of these cells within small remnant alveolar spaces and bronchiolar lumens. Some air spaces contain predominately eosinophils or macrophages. Some bronchioles contain submucosal accumulations of similar cells. A rare

bronchiole at the margin of the inflamed area contains a large luminal aggregate of fibrin, and is lined by low cuboidal epithelial cells. A small caliber bronchus, also at the outer margin of the inflammation, luminally contains several necrotic and mineralized nematode cross sections, is devoid of epithelium, and is surrounded by large numbers of lymphocytes and plasma cells. Throughout the remainder of the section, the interstitium contains mild diffuse to multifocally moderate accumulations of lymphocytes and eosinophils with a rare plasma cell.

Slide 3:
Lung: The interstitium contains frequent, small to moderate-sized accumulations of lymphocytes and eosinophils with lesser macrophages and neutrophils and a rare plasma cell. Often accumulations are perivascular and peribronchial with extension into surrounding alveolar interstitium. Rarely there are discrete nodular aggregates of these cells, with a central small cluster of macrophages containing phagocytozed debris. The pleura contains few small, discrete nodular aggregates of lymphocytes with low numbers of lymphocytes also in the subpleural interstitium.

Diaphragm: NSF

Slide 4:
Trachea: The submucosa diffusely contains low numbers of lymphocytes.

Large caliber artery (aorta presumptive): NSF

Slide 5:
Pharynx with salivary gland: The submucosa contains extensive extravasated erythrocytes (hemorrhage) with similar hemorrhage within pharyngeal musculature.

Lymph node: The cortex contains frequent moderate-sized follicles with prominent germinal centers (reactive hyperplasia). Sinuses contain low numbers of macrophages and erythrocytes and few neutrophils.

Adrenal: The cortex is multifocally mildly congested.

Slide 6:
Urinary bladder (2 sections): The submucosa contains very few, widely scattered lymphocytes.

Vagina: NSF

Ovary: NSF

Lymph node (prescapular, per trim form): Sinuses as for Slide 5.

Slide 7:
Lymph nodes (2 sections): Both have moderate reactive lymphoid hyperplasia as for Slide 5. One contains few scattered sinus macrophages, eosinophils, erythrocytes and neutrophils.

Pharynx with salivary gland: NSF

Slide 8:
Tongue: The submucosa has focal, moderate hemorrhage. Deeper, the muscle contains multiple lesser foci of hemorrhage. The mucosa overlying has moderate intra- and intercellular edema.

Uterus: NSF

Slide 9:
Skeletal muscle with scant stratified squamous mucosa, probable distal genital tract or proximal esophagus: NSF

Thymus: NSF

Uterus: NSF

Slide 10:
Lymph node: Sinuses contain large numbers of erythrocytes with few macropahges and neutrophils; Few macrophages contain phagocytozed erythrocytes.

Spleen: White pulp contains many follicles of variable cellularity. The red pulp contains few erythrocytes and the capsule is undulant (contraction).

Slide 11:
Esophagus: NSF

Intestine: The lamina propria contains moderate numbers of eosinophils.

Slide 12:
Intestine: As for Slide 11.

Luminal organ muscularis (possible reproductive tract): NSF

Slide 13:
Lymph node (mesenteric per trim sheet): Sinuses contain few, scattered macrophages and neutrophils; There are rare discrete clusters of neutrophils. The stroma and capsule contain low numbers of lymphocytes and plasma cells. There is mild to moderate lymphoid hyperplasia as for multiple other nodes.

Large intestine: GALT aggregates have mild reactive hyperplasia.

Slide 14:
Heart: There is a moderate-sized region with mild congestion.

Slide 15:

Heart: Scattered myocytes have mild nuclear rowing.

Slide 16:
Brain (pons) and spinal cord: There is mild, multifocal congestion.

Slide 17:
Brain (cerebellum): NSF

Slide 18:
Brain: NSF

Slide 19:
Brain (cerebrum) NSF

Slide 20:
Brain (cerebrum): NSF

Slide 21:
Skin with blubber: NSF

Skeletal muscle: NSF

Slide 22:
Bone marrow: All lineages are present. Generally numbers in all lineages are adequate, though there are lesser than expected numbers of mature granulocytes (lowered storage pool).

Slide 23:
Eye: NSF

Final Diagnoses:

1. Severe, regional, traumatic mandibular and sublingual subcutaneous and intramuscular hemorrhage with intralesional stingray barb (gross diagnosis)
2. Moderate, regional, glossal hemorrhage
3. Severe, regional skeletal muscle hemorrhage
4. Moderate, focal, necrotizing, suppurative, eosinophilic and granulomatous pneumonia; Mild, multifocal, granulomatous and eosinophilic interstitial pneumonia; Rare chronic lymphocytic bronchitis with intralesional necrotic nematodes
5. Mild to moderate, multicentric, lymph node, splenic and GALT reactive lymphoid hyperplasia

Comments:

The most significant finding and presumptive cause of death was regionally severe traumatic wound and hemorrhage (stringray barb wound). The contracted spleen inferred blood loss was severe enough to evoke this protective response.

Pneumonia was considered secondary to parasitism/lungworm, though the focus of necrosis was unusual; Given the number of neutrophils, this may have been a small focus of bacterial pneumonia secondary to primary lungworm infection, which does occur occasionally. The limited distribution and walled-off nature of this lesion infer it was not of great clinical consequence.

Reactive lymphoid hyperplasia reflected generalized immune-stimulation and response to pulmonary infection.

Reported By:

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