

The University of Texas Medical Branch at Galveston



DEPARTMENT OF PATHOLOGY
DIVISION OF SURGICAL PATHOLOGY

2180 John Sealy Hospital, E-88
Galveston, Texas 77555-0588
(409) 772-2853
(409) 772-4676 (FAX)

Ramon L. Sanchez, M.D., Director
Daniel F. Cowan, M.D.
William K. Gourley, M.D.
Dhruv Kumar, M.D.
Shimareet Kumar, M.D.
L. Clarke Stout, Jr., M.D.

May 4, 1993

Graham Worthy, Ph.D
Texas Marine Mammal Stranding Network
4700 Avenue U
Galveston, Texas 77551

RE: GA 484

Dear Dr. Worthy:

This will report to you my findings in the case of the Tursiops referenced above. My opinion is based on the gross autopsy examination and the study of histologic materials collected during that examination. A summary of the gross findings at autopsy is attached. I have not included histopathology in this report, but this is available if of interest.

The major finding is of amyloidosis, most prominently the kidneys, but also in the thyroid gland and the palatal salivary gland. It was present in the interstitium in these organs. It was also present in the small arteries in several organs, including the spleen and the mesenteric lymph node.

Several lymph nodes had tiny microabscesses, in which I was not able to demonstrate any microorganisms. We did grow several enteric organisms from the blood, including xanthomonas maltophilia, and there was an abundant growth of Vibrio damsela in the stool, but it was not recovered from the blood. We also did some toxicologic studies on the serum, which revealed 256 ug/dl zinc and 107 ug/dl copper.

There were a few old and recent worm lesions in the lungs, but nothing out of the ordinary. There was a little black (presumably carbon) pigment in the lung related lymph nodes. The heart showed only acute changes, attributable to stranding.

I attribute death to natural causes. This animal has a chronic disease, amyloidosis. This is only the latest of several cases of this disease we have seen since 1991. I cannot pinpoint it as cause for stranding today, rather than yesterday or tomorrow. That is, it is something that the animal has been tolerating for a while. The microabscesses in the lymph nodes suggest that the animal was septic.

A notable feature in this case is that the animal is young, to judge from the active spinal growth plate. I do not believe that human interaction was involved in this animal's death.

Sincerely,



Daniel F. Cowan, M.D.
Professor of Pathology

Dolphin autopsy.

02 16 1993

GA 484 Tursiops truncatus 219 cm female.
Weight not determined.
Age not determined by #GLG ? 6 years or so

Animal was recovered dead, Code 2, from Emerald Beach Island, 9.8 miles E of the ferry landing (8.53 NM east). 29° 26' 8" N, 94° 38' 7" W

External examination: Animal is in very good shape, externally. Only a few small epidermal ulcers. Peripheral vasodilation.

Internal: Extensive adhesions. Yellowish material in left mammary; muscles dry, stomach and liver adherent to the diaphragm; Braunina in the second chamber; lungs and liver dark and blotchy. Both flipper joints opened; cartilage smooth and glassy; synovial fluid gelatinous.

Lungs: Left has a number of whitish patches, without a noticeable increase in density.

Lymph nodes are all pale. No gross pigmentation.

Heart: myocardium normal, vessels normal.

Liver: texture a little firmer than usual. Needle biopsy fixed in glutaraldehyde/paraformaldehyde.

Intestine: Second gastric chamber has extensive erosions/ulcerations or granularity of the mucosa, and whitish patches suggesting fibrinous exudate. Only a few Braunina. The mucosa of the 4th chamber is rugose. Not seen this before. Remainder of the intestine is normal.

Kidneys: Both have pale cortices, suggesting tubular necrosis. One calyx dilated. Needle biopsy fixed in glut/para for EM.

Bladder normal.

Adrenals: grossly normal.

Brain was removed; not weighed before tox samples taken. Grossly normal. Skull normal. Vertebral body sampled for bone marrow. Body shows a cartilaginous growth plate.

Cultures: heart blood; small intestine, large intestine.
Four redtop tubes taken for hepatitis serology and for tox.