

Pathology Report

Submitter Ref.: H308	Date Sent: 26/10/2022	Accession No.: 61420
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To: [REDACTED]
Department of Conservation
WCSI

Report Sent:
Copy To:

Email: [REDACTED]

Species: Cetacean	Breed: Hector's Dolphin		
Age: Juvenile	Sex: Female		
Owner:	Type: Post Mortem		
ID: H308	Prev. Accn.:		
Submitted:	At Risk:	Affected:	Dead:

History

Seen by member of public as live stranding. Refloated. Found dead ?next day in nearby location.

Gross Findings

This dolphin was chilled and air freighted for necropsy. The body was in a good state of post mortem preservation, with minimal skin slippage, minimal scavenger damage and no bloating. The right eye was completely scavenged, as was the soft tissue around the mandibles on both sides, exposing the underlying bone. Body condition was assessed as fair, with a slightly flattened lumbar muscle profile and a slight 'neck'. Blubber depths were adequate (14mm dorsal; 10mm lateral; 11mm ventral). The standard length was 1.085m and the dolphin weighed 22kg. There were numerous skin 'cracks' (post mortem skin damage), and scattered healed wounds. There were no encircling or linear impression marks or other skin marks consistent with entanglement. Several circular pigmented lesions were present on the flanks (interpreted as 'tattoo pox' lesions). The teeth were in good condition.

There was a small amount of sand in the oral cavity.

The left lung was dark red and heavy (congested) and there was a small amount of watery fluid in the larger airways. The lungs contained myriad 1-3mm diameter dry yellow gritty foci, consistent with lungworm lesions, and lungworm were present in the lumen of several smaller airways. On cut surface the lung parenchyma had numerous mottled pale patches. There was a focal, irregular, 4 x 3 mm friable red/black lesion on the luminal surface at the opening of the right accessory (tracheal/apical) bronchus. The associated lung parenchyma (apical portion of the right lung) contained multiple poorly circumscribed pale greenish tan foci. The sternal lymph nodes were subjectively enlarged. The stomach was empty apart from 2 small stones, one in each compartment. The glandular mucosa was multifocally thickened, with several focal areas of superficial ulceration. No prey remains were present. The ovaries were small and smooth (immature). The bladder was empty. The kidneys contained a few pale renules.

Histopathology

1. Lung: chronic multifocal fungal pneumonia, with severe chronic-active bronchointerstitial pneumonia, alveolitis and multifocal parasite granulomas
2. Right accessory bronchus: focally extensive necrotising and granulomatous bronchitis with intralesional fungi
2. Kidney: fungal granuloma with suppurative, eosinophilic and lymphoplasmacytic tubulointerstitial nephritis
3. Bladder: mild diffuse subacute cystitis
4. Uterus: moderate chronic-active endometritis
5. Cerebral cortex: focal parenchymal rarefaction with mild eosinophilic and mononuclear perivascular cuffing, mild gliosis and rare spheroids
6. Cerebral cortex: acute focal haemorrhage, grey matter
7. Midbrain and cerebellum: multifocal perivascular cuffing and occasional glial nodules

Diagnosis

Disease: fungal pneumonia and septicaemia

Comments

This dolphin had extremely severe pneumonia, caused by fungi and by lungworm. The degree of damage to the

lungs alone would have compromised this dolphin's health, but has been compounded by spread of the fungus to the kidneys, presumably in the bloodstream (fungal septicaemia). There were also histological lesions present in the brain, which could explain the apparent weakness/disorientation reported in the dolphin when it was first seen. Fungal infections occur sporadically in dolphins, and are mostly due to *Aspergillus*, a widespread airborne fungus. We have seen several cases of aspergillosis in Hector's dolphins over the years, and because this infection can sometimes be associated with immunosuppression we will include tissues from this dolphin in our surveillance testing for morbillivirus (which is an immunosuppressive virus).

Date: 31/10/2022	Pathologists: [REDACTED]
Students:	