School of Veterinary Science

Pathology Report

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To: [redacted]
Department of Conservation
Hamilton

Email:

Report Sent: 01/11/2018
Copy To: [redacted]

Species: Cetacean		Breed: Hector's Dolphin	
Age: Adult		Sex: Female	
Owner: Department of Conservation			Type: Post Mortem
ID: Maui Dolphin			Prev. Accn.:
Submitted:	At Risk:	Affected:	Dead:

History

Found washed ashore at Gibson Beach,Te Akau. Chilled and shipped to Massey via refrigerated transport.

Gross Findings

This female dolphin presented chilled, in good body condition and a fresh state of post mortem preservation. Weight = 71kg; total length = 164cm. A skin sample had been removed from the left side, immediately below the dorsal fin. There was mild, superficial skin slippage on the right side of the body; the left side was in a very good state of preservation. There were no nicks, lacerations or impression marks suggestive of entanglement. There were several pox lesions and rake marks, and a few linear 'cracks' along the skin of the ventrum. Fetal membranes protruded approximately 2cm from the genital slit, and a fetus was palpable.
Flensing showed this dolphin to be in good body condition (blubber depth 26mm dorsal, 19mm lateral and 24mm ventral). There were very few blubber cestodes. The mammary gland was well developed and on incision showed a very small amount of (presumed) milk.
The distal soft palate and oropharynx had multiple soft pedunculated masses up to 1cm long, covered in grossly normal mucosa. The oesophagus was coated with a scant amount of greyish/pink mucoid material. The stomach contained no prey items, and was coated with black grainy pasty material (melena), with accumulation of about 10 ml of this material in the distal part of the squamous compartment. The mucosal compartment contained 2 deep irregular ulcers up to 2cm across. The liver was firm on incision.
The lungs were well aerated with no fluid or froth in the airways. Several lungworms were present in smaller airways.
The uterus was markedly distended by a large, apparently near-term male fetus (total length 79cm; weight 6.4kg). The fetus was in a poor state of preservation, with multiple bullous 'blisters' over the skin surface, and tearing of the skin/blubber immediately cranial to the left flipper with eversion of partially liquefied muscle and organs. The soft tissues of the head and throat were oedematous and emphysematous. The maxilla and mandible appeared to be shortened. The tail was folded back on itself at the midpoint, with the distal half of the tail wedged against the genital slit. The body and head of the fetus were within the left uterine horn, except for the right flipper which was hooked into the right horn. The internal organs of the fetus were markedly decomposed and mostly unidentifiable.

Histopathology

Histo summary (female):
Subacute placentitis and metritis (placental and uterine inflammation/infection) with intralesional Brucella organisms

Histo summary (calf):
Tissues were too decomposed for histological analysis

Microbiology

Frozen fetal lung, maternal lung and uterus/placenta were positive for Brucella on PCR

Diagnosis

Brucellosis (placentitis/metritis and fetal death) with maternal death due to septicaemia

Comments

Note: This is a final report, incorporating findings from gross post mortem, histology and molecular diagnostic testing, and supplements the earlier preliminary report.

COMMENT (summary of gross, histological and molecular diagnostics):
The final diagnosis in this case is brucellosis. The sequence of events in Brucella infection involves Brucella bacteria in the blood stream of a pregnant female that localise in the uterus and placenta (metritis and placentitis), followed by spread of bacteria to the fetal tissues and death of the calf. As described in the preliminary report, when a dead fetus remains in the uterus, compounds released from the decomposing tissues move into the blood stream of the mother (septicaemia) and, as in this case, can cause death.

Date: 05/10/2018	Pathologists: [redacted]
Students:	