Post-mortem report on Squeak, an ADS dolphin

Dec 2021

Animal no.: SAM accession number 21.044, University of Adelaide number 21-02993

Collection circumstances:

21 Nov 2021. The dead dolphin was reported by Fletcher's Slip near Birkenhead Bridge, at Port River, Adelaide Dolphin Sanctuary. It was picked up by marine parks rangers (Department of Environment and Water) on the same day. It was delivered to the University of Adelaide, Veterinary school, Roseworthy.

Location of carcass collection: Fletcher's Slip, 34° 50' 28.2''S, 138° 29' 59.4''E

Species: Indo-Pacific bottlenose dolphin (*Tursiops aduncus*)

Age: Juvenile.

Sex: male

Weight: 43.5 kg

Total length: 167cm

Clinical history

Squeak was first seen 10 March 2018 to female ADS dolphin Mouse.

Squeak was observed with signs of compromised body condition on 19 Aug 2021, then it was apparent that weight loss continued over three weeks before (end of October 2021). He was last seen alive on 16 Nov 2021. Squeak was found lying upside down in shallow water when the ranger found its body.

Post-mortem:

Necropsy: 22 Nov 2021 (1300 to 1700 hrs).

Gross findings of the post-mortem

The condition of the carcass was assigned to Geraci Code 2+ according to the following observations. Skin was peeling off with minor scavenger damage on the skin, skin colour good, pancreas contained gas, and liver was slightly soft.

External observations

Body condition of the dolphin was very emaciated, with three features of emaciation. Several white fringed skin lesions were found on both side of lateral and one ulceration on the tail fluke. Tooth rakes was found on the peduncle.

Internal observations

Severe deep subcutaneous haemorrhaging associated with edema was found right lateral head neck area. This haemorrhage extended deeply along the right side of vertebrae. There was severe congestion in the left hemisphere of the brain, meningeal haemorrhaging was observed on the parietal region.

Both abdominal and thoracic cavity contained an amount of blood coloured fluid with good organ position.

Liver was soft and congested; it could be related to the state of decomposition.

Spleen was atrophied with dark spots on the surface. Cut surface showed slight swollenness.

Mesenteric lymph nodes were mildly enlarged.

Adrenals were mildly enlarged.

In the thorax, the right lung lobe was discoloured red, but the left lung lobe did not show any significant changes. However, there was pulmonary haemorrhage on the cut surface and a small amount of blood coloured fluid was observed in the pulmonary bronchi.

Stomach appeared to have some solid contents; further examination will be conducted. An adequate amount of digested faeces was observed in the intestinal tract. The mucous membranes of intestine show redness and are mildly thickened.

No significant findings were noted other organs.

Other tests

Bacterial tests (appendix 1): Table 1 summarises the bacteria identified. Samples were taken from blowhole, oral cavity, faeces, blood from heart, brain and cerebrospinal fluid.

Table 1: Bacterial test results for Squeak

Organ	Bacteria
ear	*Vagococcus fluvialis* *Paeniclostridium sordeli*
lung	*Vibrio alginolyticus, Vibrio parahaemolyticus, Escherichia coli, Paeniclostridium sordeli*
skin	*Vibrio harveyi, Vibrio alginolyticus*

Some bacteria are known to cause opportunistic infections, but this must be accompanied by histological results.

These bacteria species are the first time appeared in this region_ *Paeniclostridium sordeli,*

Toxoplasmosis: Testing in progress

Morbillivirus (appendix 2): negative for lung and brain

Brucellosis: Testing in progress

Skeleton pathology: will be examined when the skeleton have been prepared.

Heavy metal and Organic choline testing: will be organised.

Summary

The Circumstance of death categories developed by the South Australian Museum include five classifications and after post-mortem animals are assigned to one of these based on the information available. We preliminary conclude that the most likely circumstance for the dolphin, Squeak, is 'Unknown (blunt trauma, probable chronic condition)'. The following is the evidence for this conclusion.

Further tests are still underway and next report will be available when more results will be out.