

For the attention of Dr. K. JURCZYNSKI
Duisburg Zoo

NECROPSY REPORT : ref A16-325
Date of necropsy : January 4, 2016

ANIMAL: Bottlenose dolphin (*Tursiops truncatus*), new-born, male

HOLDER : Zoo Duisburg AG, Mülheimer StraBe 273, 47058 Duisburg, Germany
Date of birth : December 22, 2015
Date of death : January 3, 2016 (0.19 a.m.)

1. NECROPSY

Body weight: 26 kg; body length: 117 cm
Blubber thickness: dorsally: 10 mm; laterally: 10 mm; ventrally: 10 mm

EXTERNAL EXAMINATION : Conservation code: 1

NUTRITIONAL STATUS : Good

The umbilical cord is absent, small amount of blood oozed out of the umbilicus but the umbilicus is healed.

INTERNAL EXAMINATION:

Subcutis and muscle:

- the entire body is very pink (anemia) and there is a bicolor aspect (red pinkish to brown) of skeletal muscles, mostly for the cranial part of the body
- presence of a focal area of muscular necrosis (2cm in diameter), dorsal muscle, laterally (left) of the dorsal fin;
- the prescapular lymph node is slightly congestive and edematous

Abdominal cavity:

- the spleen is slightly hypertrophic (splenomegalia)
- no significant observation of the umbilical vessels;
- presence of perirenal fat;

Thoracic cavity and neck:

- the heart is bicolor but the general morphology is normal (no congenital alteration);
- the lungs are slightly congestive with edema in airways characterized by small amount of white foam;

2. HISTOPATHOLOGY

Samples of different organs (brain: 5 samples, optical nerve, kidney, adrenal, liver, esophagus, intestine, urinary bladder, lung, testis, thymus, umbilicus, humerus, thyroid, spleen, muscles: 2 samples, prescapular lymph node, myocardium, pancreas) have been collected and fixed in 10% buffered formalin. Sections were stained with hematoxylin and eosin.

Only samples with morphological alterations are reported.

Brain : some areas with moderate congestion

Kidney : renal tubular cells were finely vacuolated (small empty vacuoles around nucleus: vacuolar degeneration appearance). Focally, an area of lymphocytes infiltration was present (focal subacute nephritis).

Liver : hepatic tubular cells were finely vacuolated (small empty vacuoles around nucleus: vacuolar degeneration appearance). In some areas, larger vacuoles were visible (fatty liver aspect). Some vacuoles contain pinkish material.

Lung : moderate congestion

Thyroid : congestion

Muscle (dorsal muscle, lateral of dorsal fin) : infiltration of lymphocytes in the tissue and necrotic aspect of myocytes (lymphocytic focal necrotizing myositis)

3. BACTERIOLOGY

Fresh samples of nervous tissue (brain), lung and spleen have been investigated directly under aerobic and anaerobic conditions. There were no bacteria growing.

4. CONCLUSIONS

The most relevant finding is the very pinkish coloration of muscles (like anemia). Even if muscles of neonates cetaceans are usually more pink than adults, this case seems more severe. Macroscopically, the heart was bicolor but there were no other alterations of the myocardium even under the microscope.

For other tissues, histology revealed moderate vacuolization of kidney tubular cells and some hepatocytes such findings could be linked with the anemia. The cause of death is associated with asphyxia.

Yours Faithfully,

Dr Thierry JAUNIAUX
Assistant Professor