



Tasmania

DEPARTMENT OF
PRIMARY INDUSTRIES,
WATER and ENVIRONMENT

Animal Health Laboratory

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Final Report

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Owner:	WILD FOX BASS HIGHWAY BURNIE TAS 7320	Species:	Fox
		Sex:	Female
		Age:	Unknown

PATHOLOGY REPORT

Case Number 03/2299

BACKGROUND

A whole carcass of an immature female fox (*Vulpus vulpus*) was submitted for post mortem examination. The carcass was found near Burnie on the edge of a road. Tail length was 410mm and right femoral head to lateral condyle measure was 113mm. Right scapula length was 83mm.

SPECIMEN SUBMITTED

One carcass

GROSS PATHOLOGY

External examination revealed the loss of the nail from the 5th digit of the right hindlimb with some associated laceration. There was an abrasion and laceration of 50mm in length on the left

lateral aspect of the left tarso-metatarsal area. This lesion went to the depth of the underlying bone. The left hip was palpated and appeared loose with some crepitus on movement. There was an abrasive wound on the lateral aspect of the left carpal and metacarpal areas. There were two round lesions on the ventral aspect of the skin of the neck with associated crusted debris. There was a displaced comminuted fracture of the right mandible and multiple displaced fractures of the cranium. There were multiple lacerations of the tongue and many of the teeth were fractured with segments lost or embedded in surrounding tissues.

Post mortem examination revealed an animal which had low abdominal and body fat levels. There was a small tear of the intercostal muscles on the right chest wall with a small fracture of the associated rib bone. There were small discrete round clear coloured foci within the body wall of the large intestine. The stomach was empty but for a small amount of hair, mucous and pink staining material. There were dark staining small intestinal and large intestinal contents, which had moderate amounts of fibrous material in them.

The small intestine contents also contained toenail remnants. The urinary bladder was full of red yellow coloured urine with some flocculent material visible. There was petechiation and ecchymosis around the base of the liver lobes. And the liver colour was dark. The gall bladder was full.

There was extensive haemorrhage within the connective tissue of the neck particularly on the left side. The left lung appeared consolidated with ecchymosis throughout.

The cranial bones were multiple fractured with great displacement. There was no structured brain substance present within the cranium. There were copious amounts of sanguineous discharge around the inner surfaces of both pinna.

There were some random dark areas in the wall of the uterus and the left ovary had raised clear areas underlying the ovarian capsule.

HISTOPATHOLOGICAL FINDINGS

NB Marked post mortem autolysis made interpretation of changes difficult.

The kidney's showed marked autolysis with foamy deposits within the distal convoluted tubules in the areas of the medulla, both kidneys. This deposit was confirmed as fat by Fat Oil Red O stain. There was marked autolysis present in the liver with linear spaces throughout the parenchyma. These spaces did not resemble ice artefacts and were more consistent with post mortem oedema. The spaces were delineated with a zone of degenerate cells. A frozen section of liver was prepared for comparison and showed marked ice artefact.

Skeletal muscle was autolytic with fragmentation of muscle fibres. Some samples from the cranial area had foci of advanced necrosis. The lung showed areas of interstitial congestion and fluid pooling consistent with postural pooling post mortem.

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There was advanced degeneration of the spinal cord.

Pancreas, spleen, uterus, myocardium, ovaries, intestine, stomach presented no significant lesions.

DIAGNOSIS

Severely comminuted displaced fracture of the cranium and mandible with associated trauma to surrounding soft tissues.

Contusion of the abdominal skin.

Laceration of foci on the distal areas of the limbs.

COMMENT

The degree of post mortem autolysis present in the carcass is indicative of approximately 36-48 hours duration under conditions of ambient temperature around 21. The degree and speed of post mortem autolysis may be hastened by increases in ambient temperatures and a number of other factors such as condition of the animal and physical activity prior to death. Given the available history for this carcass it would appear that time after death and ambient temperature are important factors.

The traumatic lesions (eg fractures and contusions) present in the carcass are consistent with lesions produced by concussive and crushing trauma. The type of forces that would be present if the animal had been struck and crushed by the weight of a motor vehicle.

The animal was alive at the time the injuries were inflicted.

MICROBIOLOGY REPORT

SAMPLE: Fox 1. Lung
2. Liver

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GRAM STAIN: 1. Mixed bacteria(±)
2. No bacteria seen

CULTURE: 1. Mixed bacteria(+++) Predominantly mixed coliforms
2. Mixed bacteria(+) Predominantly enterococci

COMMENT:

± scant + light ++ moderate +++ heavy
No significant growth.

CLINICAL PATHOLOGY REPORT

Urinalysis:

Volume (ml): 12 Colour: Yellow Turbidity: ++++

Specific Gravity: 1.024 (Isosthenuric range = 1.008 - 1.012)

pH: 7 Bilirubin: -
Protein: ++ Heme ("blood"): -
Glucose: + Urobilinogen: +++++
Ketones: -

Cells: 15 (/hpf) Misc:
Epithelial: 15 Bacteria: -
Erythrocytes: 0 Fat: +++++
Leukocytes: 0 Sperm: -
Other _____: Debris: -

Crystals: 50 Type: Struvite Casts: 0 Type: _____

Interpretation: All paramaters measured are within a normal range eventhough some appear to be quite high. The turbidity of the urine sampled was mostly a function of the insoluble components (eg Fat) being in high levels. High fat levels in the urine are not indicative of pathological processes. The presence of urobilinogen is an indication of patanet bile ducts and the amount present in the urine is affected by a number of factors with even high levels not indicating more than a possible increase in erythrocyte turnover. The protein levels are reflective of cellular breakdown but given the level of post mortem autolysis present in the carcass it is very hard to draw any conclusions from a slight increase in protein in the urine. The slight glucose increase possibly reflects glucose filtration over the renal threshold which may occur in times of stress.it may also just be due to cellular leakage post mortem.

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