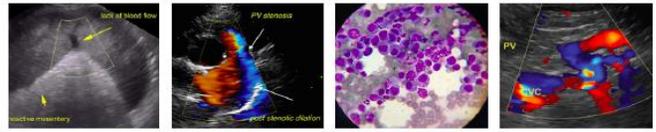


PATIENT	History Initially assessed for otitis externa in June – was obese and showed elevated liver enzyme activity. Placed on diet with resultant weight loss. Otitis improved and showed progressive weight loss. In July showing less energy, poor appetite, polydipsia, and occasional vomiting.
Lucy King	
SPECIES	Current therapy None stated.
Canine	
BREED	Physical Examination Not stated.
Dalmatian	
SEX	Urine Analysis (7/25) SG 1.011, mild glucosuria. Negative sediment.
FS	
AGE	Hematology (6/7) Within reference range.
8 years	
WEIGHT	Serum biochemistry (6/7) Elevated ALT activity (279 U/L) and triglycerides (3.51 mmol/l) and severely elevated ALP activity (1042 U/L).
28.1 kg	
HOSPITAL NAME	Serum biochemistry (7/21) Severely elevated ALT (656 U/L), ALP (1926 U/L), and AST (165 U/L) activity.
Grand River Animal Hospital	
REFERRING VET	Serum biochemistry (8/18) Severely elevated ALT (695 U/L), ALP (> 2000 U/L), and AST (122 U/L) activity.
Dr Paul Robinson	
DATE	Coagulation profile (7/26) Within reference range.
8/27/22	
	4Dx (6/7) Negative.
	Fecal panel (7/25) Negative.
	Abdominal Ultrasound (6/13) <ul style="list-style-type: none"> Non-specific hepatopathy with a pronounced caudate process.
	Abdominal Ultrasound (7/27) <ul style="list-style-type: none"> Hepatopathy with a swollen caudate process.
	Liver cytology (7/28) <ul style="list-style-type: none"> Non-diagnostic.
	Liver cytology (8/23) <ul style="list-style-type: none"> Vacuolar hepatopathy Mild lympho-plasmacytic infiltration.



PATIENT **INTERPRETATION OF THE FINDINGS/DIFFERENTIAL/PERTINENT DIAGNOSES**

Lucy King The important findings are:

- SPECIES**
- Progressive elevation of liver enzyme activity, both ALP and ALT activity.
 - Systemic clinical signs - less energy, poor appetite, polydipsia, and occasional vomiting, and weight loss.
 - Non-specific changes on ultrasound and FNA cytology.

BREED

Dalmatian The isosthenuria may have a spurious result but can be as a result of the liver disease but needs to be followed up

SEX

FS As both ALP and ALT (and AST) is elevated, combination of hepatocellular injury and bile duct pathology is present. In addition, as both the ALT and AST activity has remained static but elevated it implies that there is ongoing hepatocellular injury as the half-life of both enzymes is 2-3 days.

AGE

8 years With a vacuolar hepatopathy as diagnosed on cytology, patients generally are asymptomatic with abnormal liver enzyme activity picked up as an incidental finding on routine assessment – as was the case at first presentation for Lucy. With the systemic signs present, important differential diagnoses for the liver would be hepatitis (*Leptospira*, toxins, bacterial, and drug-induced), neoplasia, immune-mediated, and copper or iron-induced hepatopathy.

WEIGHT

28.1 kg Although the swollen caudate process may be an incidental finding, this may be the underlying etiology – neoplasia or infection.

HOSPITAL NAME **RECOMMENDATIONS**

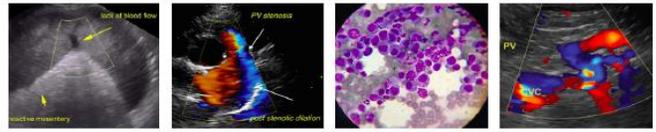
Grand River Animal Hospital Initial further assessment would be:

- REFERRING VET**
- Dietary history - toxins derived from molds, fungi, algae, spoiled or contaminated food, and metals.
 - Drug history – ensuring no exposure to possible hepato-toxic drugs or idiosyncratic drug reactions.
 - *Leptospira* serology and/or PCR.
 - Assessing liver function – bile acids, bilirubin, albumin, and urea.

DATE

8/27/22 If these are negative then further assessment of the liver would be:

- Assessing liver function – bile acids, bilirubin, albumin, and urea
- CT scan of the abdomen.
- Tru-Cut or wedge biopsy of the liver for routine HE staining as well as staining for fibrosis, iron, and copper, as well as quantitative metal analysis of hepatic tissue.



PATIENT

Lucy King

Without further assessment or a specific diagnosis, symptomatic therapy would be nutrition, anti-oxidants, anti-fibrotic, and possibly immune-modulatory drugs. This can be achieved as follows:

SPECIES

Canine

- Feeding a balanced diet and avoiding any iron or copper supplements with protein restriction only done there are signs of hepatic encephalopathy.
- Ursodiol for its anti-oxidant and anti-fibrotic effect.
- S-adenosylmethionine (Denosyl®) for its anti-oxidant effect.
- Metronidazole for its bactericidal, immune modulatory, and antioxidant effects.

BREED

Dalmatian

Although silymarin (milk thistle) has been proven for the prevention and recovery from certain toxins (amanita mushroom, carbon tetrachloride, ethanol), clinical benefit in chronic liver disease still remains controversial, despite numerous studies in humans.

SEX

FS

Thank you for the referral. Please do not hesitate to contact me if you require any further advice concerning this case and if there is further diagnostic data available.

AGE

8 years

Remo Lobetti, BVSc, MMedVet (Med), PhD, Dipl. ECVIM (Internal Medicine)
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WEIGHT

28.1 kg

HOSPITAL NAME

Grand River Animal
Hospital

REFERRING VET

Dr Paul Robinson

DATE

8/27/22