

**DATE PRESENTING CLINICAL SIGNS**

10/3/22

Bloodwork (rDVM) 7/25/22- CBC- WNL; Bun- 33 and Cre- 1.8 over the past week- decreased appetite yesterday morning- seemed fine, did eat, was walking normally- sleeps most of the time last night- did not eat- seemed uncomfortable; having trouble walking; continue this morning known CRF- the past couple of years is on ursodiol for previous elevations in liver values on gabapentin, dasquin, naraquin almost blind

PATIENT

Angel Rich

Current Medications: amoxicillin, denamarin, ursodiol, famotidine, maropitant, entyce, gabapentin, benazpril
 Lab Results: See attached.

SPECIES

Canine

Radiographs: Stomach looks empty, enlarged liver.
 Date of Previous IntraPet Ultrasound: No previous.
 Sedation: Not required to complete full diagnostic ultrasound.
 Stat Report: Not requested.

BREED

Havanese

Imaging Performed By: Andi Parkinson, BS, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Female, spayed

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. The region of the trigone and the visible portion of the proximal urethra are normal.

AGE

10/3/2004

The left kidney is normal in size (4.24 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present. There is no evidence of infarcts or hydronephrosis.

WEIGHT

13 lbs.

The right kidney is normal size (4.18 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. A few cortical cysts are seen, the largest measuring 0.58 cm in diameter. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present. There is no evidence of infarcts or hydronephrosis.

INTERPRETED BY

Andrea Nicastro, DVM,
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 (Small Animal Internal
 Medicine)

Adrenal Glands

The left adrenal gland is normal size (0.57 cm at cranial pole) (0.53 cm at caudal pole) (1.90 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

HOSPITAL NAME

Animal Emergency
 Hospital

The right adrenal gland is normal size (0.39 cm at cranial pole) (0.40 cm at caudal pole) (1.64 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

REFERRING VET

Dr. Willer

Spleen

The spleen is normal in size (1.08 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

INVOICE

14038

Liver

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is mildly hypoechoic relative to surrounding omental fat and relatively homogeneous in appearance. No distinct focal lesions are observed. There is an increase in portal markings. Vascular is of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of aggregated echogenic to mineralized debris/sludge is observed within the lumen, most

of which is gravity-dependent and some of which is suspended. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is not distended. The gastric wall is normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

There is no evidence of free fluid. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

- Bilateral, degenerative renal changes with dystrophic mineralization and trace pyelectasia.
- The increase in hepatic portal markings is suggestive of an inflammatory process.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the elevated liver enzymes, consider the following:
 1. Leptospirosis testing including blood and urine PCR, serology.
 2. Pre- and post-prandial serum bile acids to assess hepatic function.
 3. Hepatic tissue sampling (i.e., fine needle aspirate or surgical biopsy (if clotting status is appropriate). If biopsies are pursued, additional hepatic tissue samples should be obtained for potential copper quantitation as well as aerobic and anaerobic bile cultures. While awaiting test results, empirical treatment for bacterial cholangiohepatitis (i.e., broad spectrum antibiotics, hepatic antioxidants and symptomatic care) is recommended.
- Regarding the azotemia, a urine culture and sensitivity is recommended, preferably on a pre-antibiotic sample. Also consider a UPC (if proteinuria is present in the absence of an infection). A repeat blood pressure measurement should also be considered to assess for persistent hypertension. If present, an anti-hypertensive agent (i.e., amlodopine) should be considered.



The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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