

**DATE PRESENTING CLINICAL SIGNS**

10/29/21 History: Patient is overweight, panting, pacing. PE otherwise unremarkable? Seems more anxious.

PATIENT Current Medications: Trazadone 50mg - 1/2 tab PO BID

Lulu Helmick Lab Results: alt 513; alp >993; Lddst - inconclusive.

SPECIES Radiographs: Not provided by the veterinarian.

Canine Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

BREED Sedation: Not needed.

Chihuahua Stat Report: Not requested.

SEX ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Female Spayed

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder is mildly distended. A scant amount of echogenic debris is observed within the lumen. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

AGE

7/10/11

WEIGHT

13.9 lbs.

The left kidney is normal size (4.37 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. A few nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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 Medicine)

The right kidney is normal size (4.77 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Several nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

HOSPITAL NAME

Northwind Animal
 Hospital

Adrenal Glands

The left adrenal gland is mildly enlarged (0.64 cm at cranial pole) (0.61 cm at caudal pole) (1.57 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. Cross

The right adrenal gland is at the upper limits of normal size (0.57 cm at cranial pole) (0.54 cm at caudal pole) (1.76 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.

INVOICE

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Spleen

The spleen is normal in size (0.81 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 0.39 cm hypoechoic nodule is observed just proximal to the hilus, at the medial aspect. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with rounded peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely heterogeneous with numerous, ill-defined, hypoechoic nodules/areas, the largest

measuring 1.20 cm on the left. A few hyperechoic nodules/areas are also seen. A 3 cm mottled swelling is observed at the caudal aspect. A 1.00 x 1.00 cm cyst is visualized deep on the right side. Hepatic vasculature and intrahepatic biliary tracts are 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, partially dependent sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is segmentally dilated with chyme. 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 right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. A 0.74 cm cranial abdominal lymph node is visualized adjacent to the pylorus.

Other

A brief echocardiogram reveals no evidence of pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Non-specific diffuse hepatopathy. Differentials include inflammatory/immune-mediated disease, hepatotoxicosis, infiltrative neoplasia, and/or concurrent benign, age-related changes (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy).
- Gall bladder sludge, non-mucocele.

Secondary Findings:

- Bilateral, age-related renal changes with non-obstructive nephrolithiasis.
- Borderline bilateral adrenomegaly.
- The hypoechoic splenic nodule trends towards the benign (i.e., focus of lymphoid hyperplasia or extramedullary hematopoiesis) with a lower possibility of emerging neoplasia.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Regarding the liver abnormalities, diagnostic considerations could include the following:

- a. Pre- and post-prandial serum bile acids.
 - b. Fine needle aspirate of the liver (if clotting status is appropriate). A 25-gauge needle should be used.
 - c. Regarding the hepatic swelling, a repeat ultrasound can be considered in 3-4 weeks to assess for progression.
2. Also consider further testing for Cushing's disease (i.e., an ACTH stimulation test +/- a full adrenal panel (send to the University of Tennessee Endocrinology lab).
 3. Three-view thoracic radiographs are recommended to assess for occult disease in the chest.
 4. Depending on the results of the above diagnostics, a surgical liver biopsy with aerobic and anaerobic bile cultures and additional hepatic tissue sampling for copper quantitation may be warranted.





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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