



PATIENT

Woody McDuffie

SPECIES

Canine

BREED

Chihuahua mix

SEX

Female, spayed

AGE

12 Yrs.

WEIGHT

10.85 lbs.

INTERPRETED BY

Andrea Nicastro, DVM,
Diplomate ACVIM
(Small Animal Internal
Medicine)

**IMAGING
PERFORMED BY**

Jenna Walsh

HOSPITAL NAME

West Hills AH

REFERRING VET

Dr. Eguchi-Coe

DATE

3/7/23

INVOICE

14713

PRESENTING CLINICAL SIGNS

History: PU/PD - inappropriate urination in the house
Radiographic Findings The radiographic study of the thoracic cavity is considered to be within normal limits for the age and the breed of the patient. The bronchial wall thickening described is typical for healthy patients of this age. Rule outs for the mildly enlarged liver include anatomic variation, hepatic nodular hyperplasia or steroid hepatopathy (diabetes Cushing's Disease). Neoplasia is less likely but cannot be completely ruled out. Clinical correlation is recommended to help limit this differential list and to help determine the clinical significance of this finding. The abdomen is otherwise unremarkable. Primary Question/Differential to Be Answered in This Exam Primary Liver, Kidney, Adrenal issues? Bladder issue?
Abnormal PE/Chem/CBC/UA Results: ALK 423, ALT 248, GGT19 UPC 2.4 Low Dose Dex Neg 07/22

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The prostate is not visualized in its entirety due to its pelvic location. In the visualized portion, it is normal in size (0.68 cm in width) with normal curvilinear peripheral contours and homogeneous parenchyma. The prostatic urethra is not overtly dilated.

The left kidney is normal size (4.53 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is isoechoic relative to the spleen. A few small cortical cysts are seen. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (4.90 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is isoechoic relative to the spleen. A few small cortical cysts are seen. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is enlarged (0.70 cm at cranial pole) (0.88 cm at caudal pole) (2.89 cm in length) with a relatively normal shape. The parenchyma is heterogeneous with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is enlarged (1.46 cm at cranial pole) (0.71 cm at caudal pole) (1.65 cm in length) with a slightly irregular shape. The parenchyma is mildly heterogeneous with some loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.47 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.

Liver



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The liver is normal to slightly prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of mostly gravity-dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. 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 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 pancreas is normal in size with normal peripheral contours. The pancreatic duct is normal. The base and limbs of the pancreas are isoechoic to surrounding omental fat. No focal lesions are observed. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

- Non-specific diffuse hepatopathy. Differentials include vacuolar hepatopathy (i.e., idiopathic, endocrine), inflammatory disease (i.e., chronic hepatitis, bacterial cholangiohepatitis), hepatotoxicosis (i.e., copper), Leptospirosis, other hepatopathy.
- The bilateral adrenal changes are most consistent with hyperplastic change. However, emerging tumors cannot be completely excluded.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider pre- and post-prandial serum bile acids to assess hepatic function.
- Leptospirosis testing should also be considered, particularly if the liver enzyme elevations are acute and/or if clinical suspicion for disease is high.
- Consider a fine needle aspirate of the liver (if clotting status is appropriate). A 25-gauge needle should be used. If cytology results are inconclusive, liver biopsies (laparoscopic or surgical) along with aerobic and anaerobic bile cultures and hepatic copper quantitation may be necessary to get a definitive diagnosis.



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- Consider empirical treatment for cholangiohepatitis with amoxicillin-clavulanic acid +/- a fluoroquinolone. If liver values improve with therapy, a 4–6-week course of treatment is recommended.
- Given the patient's age, thoracic radiographs are recommended prior to any anesthetic event.
- Given the presence of PU/PD, a urinalysis and urine culture and sensitivity should be considered +/- further evaluation for Cushing's disease (i.e., ACTH stimulation test/adrenal panel - University of Tennessee).
- Given the presence of proteinuria, consider the following:
 - Baseline blood pressure measurement
 - Tick panel
 - Initiation of an angiotensin receptor blocker (i.e., Telmisartan) +/- ACE inhibitor
 - Omega-3 fatty acids
 - Prescription renal diet





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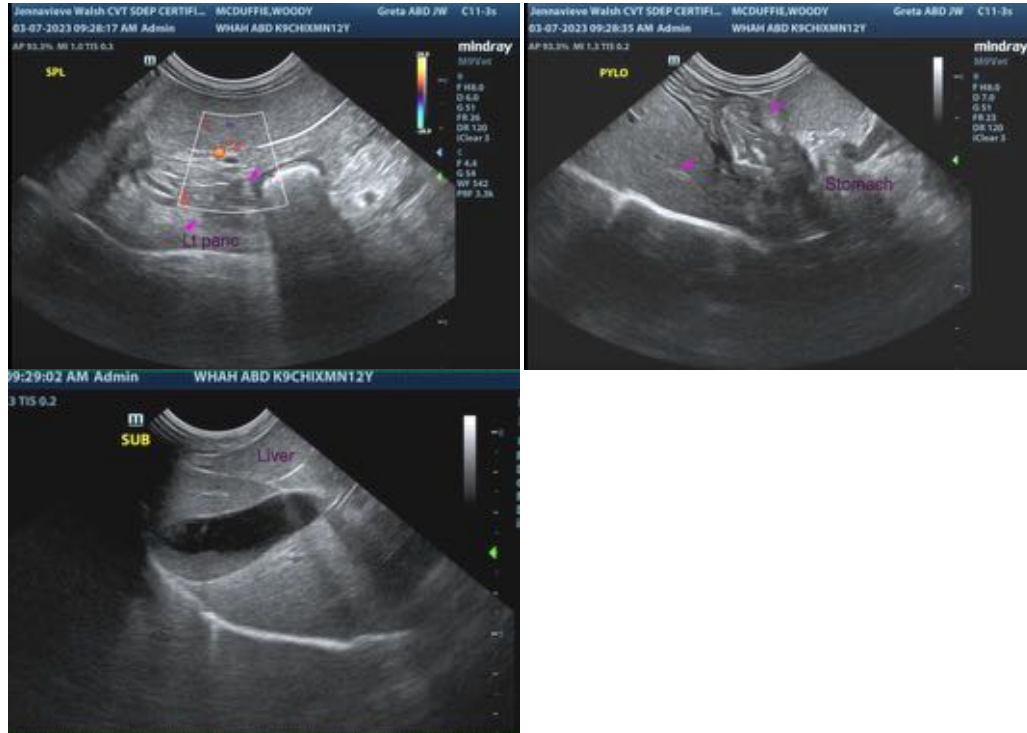
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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