



PATIENT

Gizzy Gardner

SPECIES

Canine

BREED

Jack Russell

SEX

Spayed Female

AGE

11 years

WEIGHT

15 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques,
RVT LVT

HOSPITAL NAME

Mountainview AH

REFERRING VET

Dr. Sarah Kalivoda

INVOICE

11067

DATE

6/10/22

PRESENTING CLINICAL SIGNS

History: PAWS Request Form: Chief Concern / Provisional Diagnosis: Anorexia and lethargy, elevated liver values Relevant Medical History and Physical Exam findings: Patient presented on 5/12/22 for anorexia and lethargy. Gizzy does have pain noted in the hind quarters. Blood work was performed at that time which showed an elevated albumin (4.0), ALT 131 (H) and TBil (1.1) and abnormal SNAP cPL. Patient was treated with low fat diet, Famotidine and Cerenia injection and sent home. Patient was doing well and returned for repeat blood work which showed elevated TP (8.3), Glob 4.7 (H), ALT 142 (H), Tbil 1.3 (H), and Lipa 3182 (H). Patient returned on 6/1 for anorexia and shaking. Radiographs were performed. Recent Diagnostics: Relevant Laboratory Results / Abnormalities: See above Current medications (include full name, dosage and frequency): Metronidazole liquid: 0.7 mL PO BID, Denamarin once daily, Cerenia 16 mg q 24 hours, Low Fat i/d diet Relevant Radiograph Findings (email radiographs if available): Spondylosis noted, as well as fluid/gas filled intestines. Gas noted within the duodenum.
Abnormal PE/Chem/CBC/UA Results:

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are 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. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 1-22 cm, are normal.

The left kidney is normal size (4.10 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (4.69 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is normal size (0.41 cm at cranial pole) (0.46 cm at caudal pole) (1.59 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.

The right adrenal gland is normal size (0.96 cm at cranial pole) (0.64 cm at caudal pole) (1.85 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.

Spleen

The spleen is normal in size (1.73 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



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Liver

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly heterogenous in appearance, with a few, small hypoechoic nodules. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. 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 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 ileocecolic junction and colonic wall are normal. There is no evidence of an obstructive pattern. The colonic lumen is moderately distended with granular-appearing fecal material. There is no evidence of an obstructive pattern.

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. One to two prominent mesentery lymph nodes are visualized, the largest measuring 1.19 cm in length.

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Nonspecific, diffuse hepatopathy. Differentials include inflammatory disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis), hepatotoxicosis (i.e., copper), infiltrative neoplasia (unilkley), reactive hepatopathy +/- benign age-related change (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy).
- Gall bladder debris – incidental



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*Regarding the patient's clinical signs an obvious cause is not identified in this study. Considerations include orthopedic or neurologic pain, microscopic gastrointestinal or pancreatic disease, underlying metabolic issue, other.

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Secondary Findings

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- Minor, bilateral, age-renal changes
- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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Consider pre-and postprandial serum bile acids to assess hepatic function. Consider rechecking a total bilirubin using a vacutainer to rule out hemolysis as a cause for hyperbilirubinemia. Ultimately, hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy) would be necessary to get a definitive diagnosis. Surgical biopsies are preferred in that they are more likely to be representative of global organ pathology. If pursued, aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation are recommended.

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If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, +/-metronidazole, Denamarin). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.

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Leptospirosis testing (i.e., blood and urine PCR, serology) can also be considered. However, given the chronicity of liver enzyme elevation, testing may be of low yield.

Given the patient's age, thoracic radiographs are recommended prior to any anesthetic event.

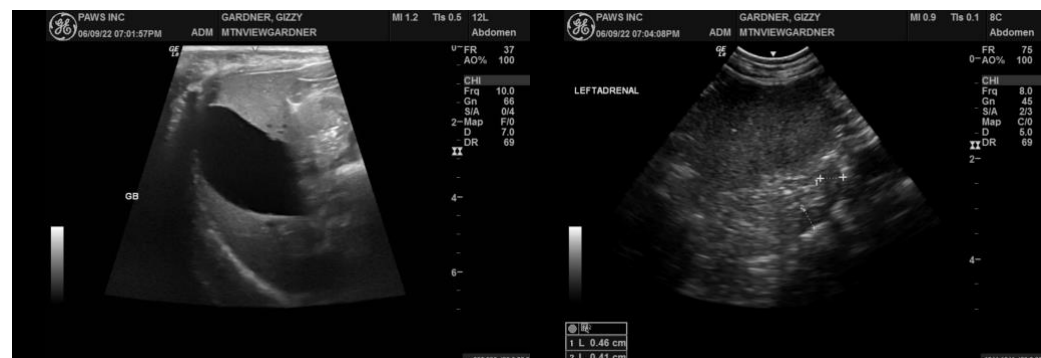
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Given the patient's clinical signs, orthopedic and neurologic examination are recommended to assess for nonmetabolic causes of anorexia and lethargy.

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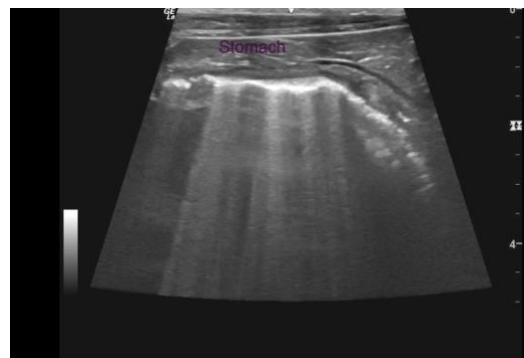
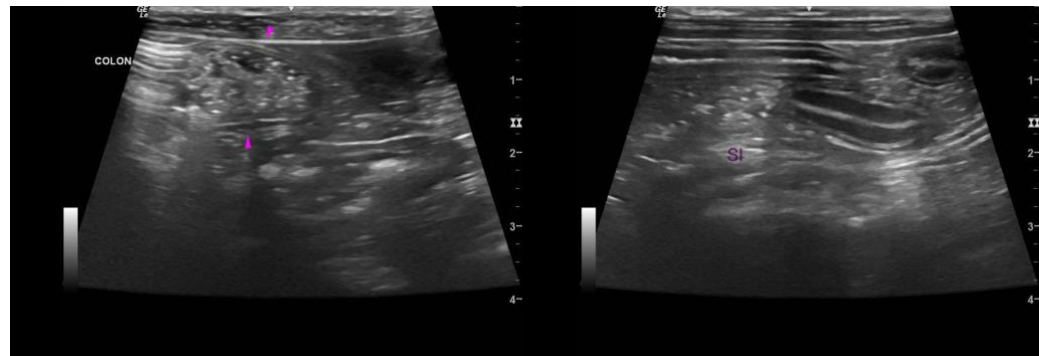
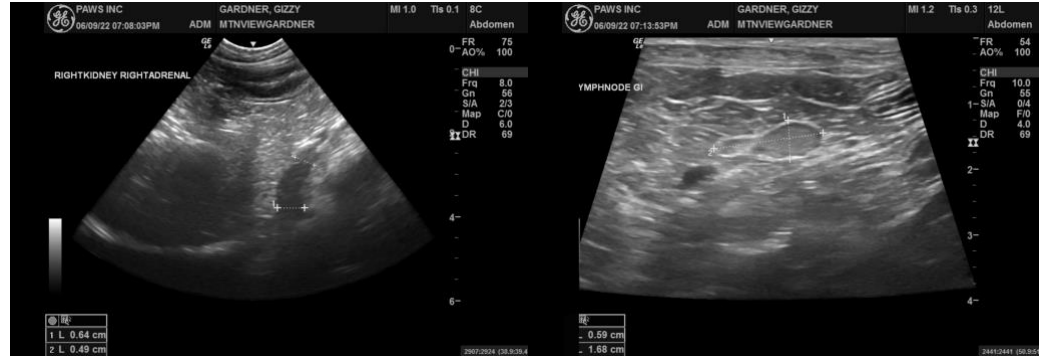
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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