SonoPath
Clinical Sonography & Telecytology
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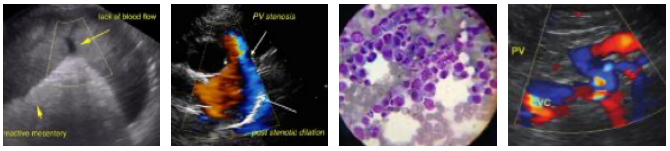

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1-800-838-4268 info@sonopath.com

PATIENT
Baxter Williams

SPECIES
Canine

BREED
Schnauzer mix

SEX
Male, neutered

AGE
11 Yrs.

WEIGHT
11.3 kg.

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

IMAGING PERFORMED BY
Erin Wicks

HOSPITAL NAME
Shores Veterinary Emergnecy Center

REFERRING VET
Dr. Lupole

INVOICE
14122

DATE
10/19/22

PRESENTING CLINICAL SIGNS

History: Presented at our hospital for AUS. Seen 8/19 – stomach seemed distended, not able to stand, possibly had a seizure, dx Lyme positive, liver values elevated, started on Doxycycline and Denamarin, rec AUS. Had recheck at rdvm and liver values had increased, rec AUS. Previous Health Concerns: seizures, Lyme, cushings Current Medications: Vetoryl, Denamarin Appetite/When did they eat last: last night
Abnormal PE/Chem/CBC/UA Results: Abdominal: non-reactive, cranial organomegaly Bloodwork 8/19/22 cbc: mchc 39.6; epoc: po2 79.3 o2 96.5 pc02 28.7 lac 4.35; chem: tp 8.3 chol>450 alp 773 ggt 27 tbili 0.7 lip 297; lipemic sample

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 normal in size (0.83 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (5.14 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is mildly hyperechoic. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (5.24 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is mildly hyperechoic. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is borderline enlarged (0.50 cm at cranial pole) (0.70 cm at caudal pole) (2.20 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.

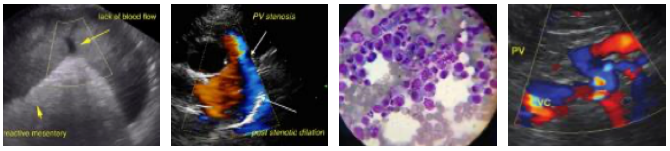
The right adrenal gland is normal size (0.78 cm at cranial pole) (0.49 cm at caudal pole) (2.62 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.25 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

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is hyperechoic relative to the spleen and diffusely mottled with ill-defined hypoechoic areas throughout the organ. A



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0.61 cm cystic lesion is observed deep on the left side. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of aggregated echogenic debris/sludge is observed within the lumen, some of which is partially dependent and some of which is adhered to the luminal surface. 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 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. The medial iliac lymph nodes are visible, the largest measuring 1.28 cm in length. The nodes are normal in shape and echogenicity. A 1.21 cm cystic lymph node is also observed in the right cranial quadrant. A 1.78 cm mesenteric lymph node is also seen.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

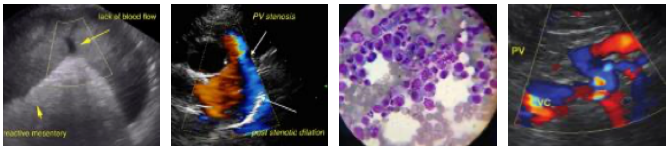
- Given the liver enzyme pattern and sonographic changes, a benign process (i.e., vacuolar hepatopathy, regenerative nodular hyperplasia) is favored. However, other hepatopathies (i.e., infiltrative neoplasia) cannot be excluded.
- Gallbladder sludge may be secondary to cholestasis, fasting or an emerging mucocele.

Secondary Findings:

- Age-related pancreatic and renal changes.
- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.
- Mild left adrenomegaly, most consistent with mild hyperplastic change.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the patient's seizure history and elevated liver values, consider pre- and post-prandial serum bile acids +/- a blood ammonia level to assess for hepatic dysfunction as a possible cause. Liver values should also be rechecked to assess for worsening. If an aggressive approach is desired, consider hepatic tissue sampling (i.e., fine needle aspirate or surgical biopsy). If a more



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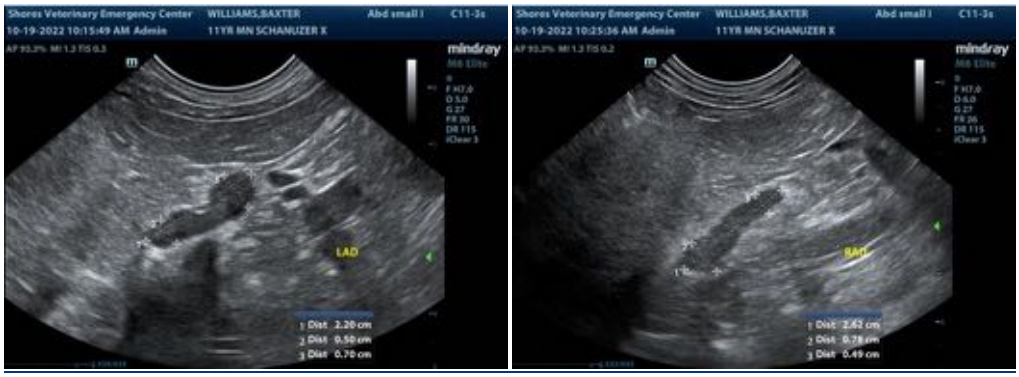
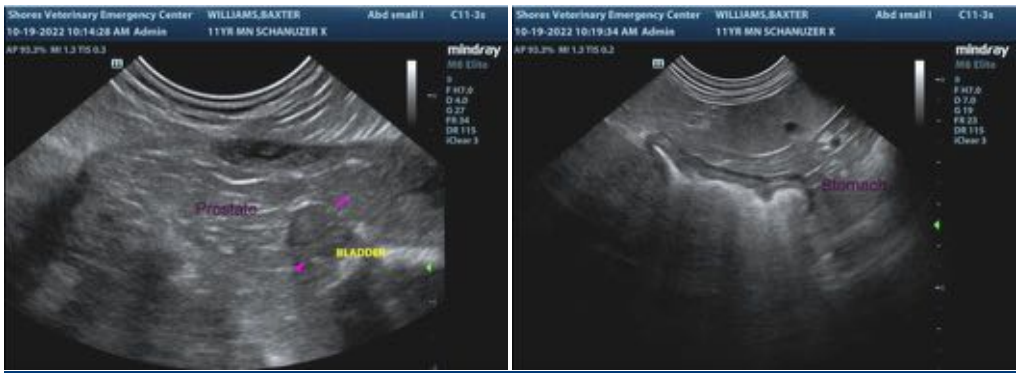
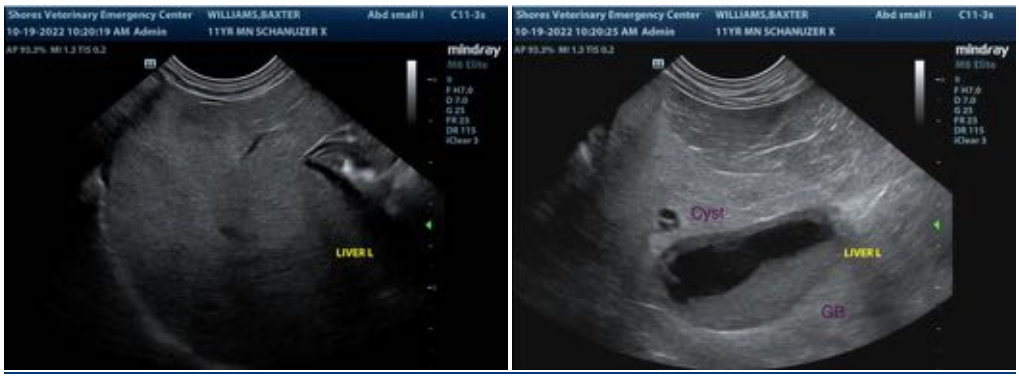
conservative approach is desired, consider serial monitoring (i.e., every 3 months) of the patient's liver values to assess for progression. If liver values continue to increase, a repeat abdominal ultrasound +/- hepatic tissue sampling may be warranted.

- Given the gallbladder changes, consider initiation with Ursodiol therapy. Alternatively, consider a recheck ultrasound in 2-3 weeks, preferably 1-2 hours post small meal. If the gallbladder changes are similar today's scan, Ursodiol can be initiated at that time.
- A baseline blood pressure measurement is also recommended to assess for systemic hypertension as a possible cause for seizures.
- Also consider consultation with a board-certified neurologist.







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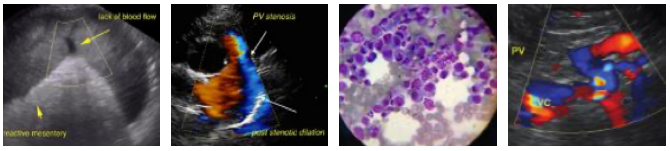

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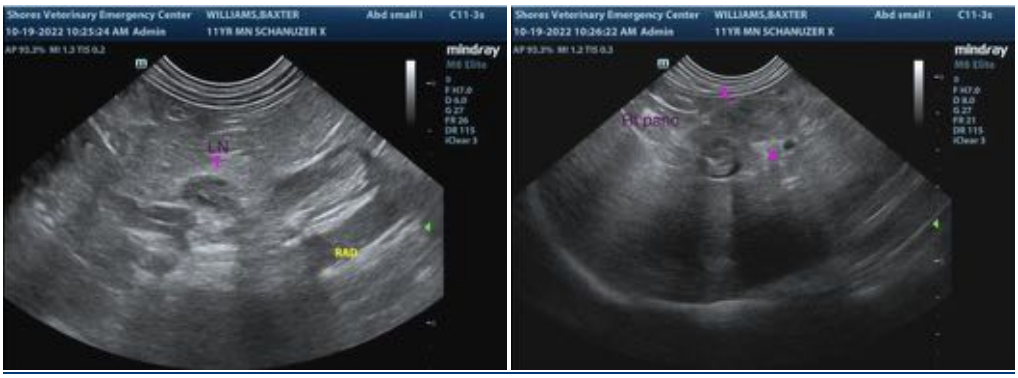

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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