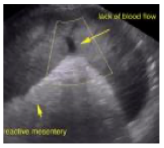
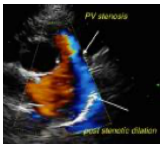
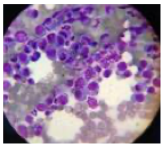
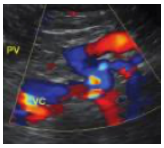
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT
Bella Reno

SPECIES
Canine

BREED
Maltese

SEX
Spayed Female

AGE
10 years

WEIGHT
2.27 kg

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

IMAGING PERFORMED BY
Dr. Van Nieuwal

HOSPITAL NAME
Animal EH Volusia

REFERRING VET
Dr. Van Nieuwal

INVOICE
11584

DATE
9.8.22

PRESENTING CLINICAL SIGNS

History: Owner states patient has history of being unable to walk (in June and one other time since), was prescribed antibiotics for this and it "fixed the problem" and patient was fine again. Has been lethargic for past two weeks, unable to walk again. Has been losing weight over time, was #7 is now #5 today. BW in June showed liver enzyme elevation, still elevated today as well as electrolyte abnormalities. Had first seizure today, lasted 30-45 minutes per owner. On presentation patient post-ictal laterally recumbent, is blind per owner, no deep pain on neuro exam.
Abnormal PE/Chem/CBC/UA Results: ALT: 1016 (with 10x dilution), HCT 64%, lactate 6.15, chloride 139, sodium 175, pH 7.354, WBC 27.27, NEU 15.26, LYM 9.72, MONO 2.23, HGB 20.3, phos 8.1, globulin 4.5, ALP 256, GGT 28

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is distended. The wall is normal in thickness. A moderate amount of gravity dependent, echogenic debris is observed within the lumen, along with a small amount of mineralized sand, +/- tiny calculi. The region of the trigone is normal.

The **left kidney** is normal size (3.74 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. A few, small nonobstructive nephroliths are visualized. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter.

The **right kidney** is normal size (3.93 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. One to two small nonobstructive nephroliths are visualized. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter.

Adrenal Glands

The **left adrenal gland** is normal size (0.36 cm at cranial pole) (0.35 cm at caudal pole); 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 (0.31 cm at cranial pole) (0.35 cm at caudal pole); 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

(No images provided).

Liver

The **liver** is normal to slightly small in size with normal curvilinear peripheral contours. The parenchyma is hyperechoic relative to the right renal cortex and homogenous in appearance. No focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The **gall bladder** lumen is distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The **gastric lumen** is moderately distended with ingesta. The gastric wall is normal in thickness with a normal layering pattern. 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. There is no evidence of an obstructive pattern.

Pancreas

A portion of the **pancreas** is obscured by the gastric distention. In the visualized portions, no obvious abnormalities are seen.

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

Primary Findings

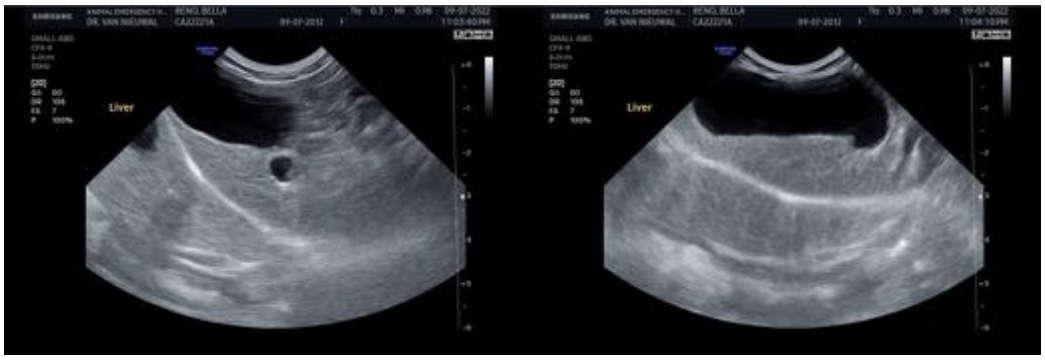
- Nonspecific hepatopathy. Differentials include inflammatory disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis), hepatotoxicosis (i.e., copper), Leptospirosis, other hepatopathy.

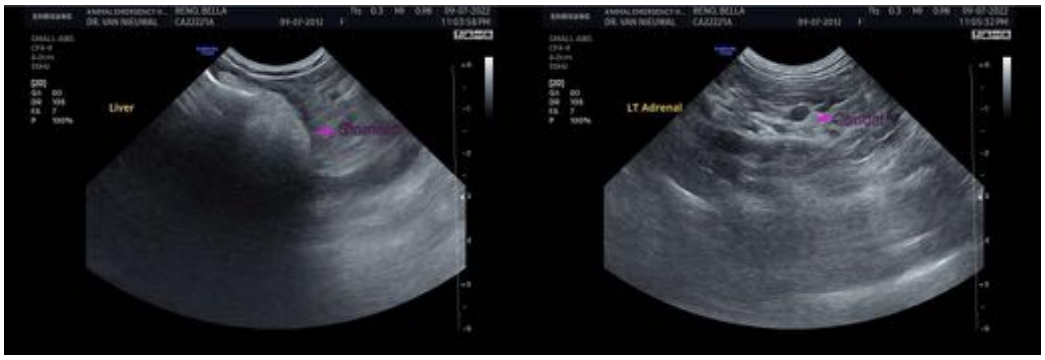
Secondary Findings

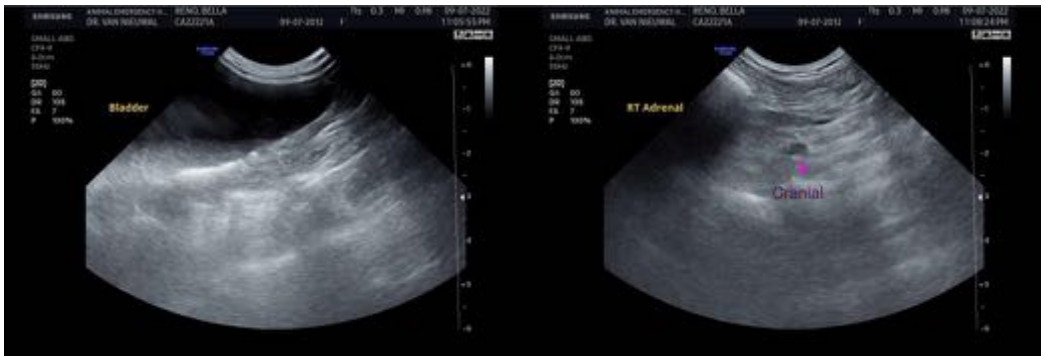
- Bilateral nonobstructive nephrolithiasis
- Urinary bladder debris/sand +/- tiny calculi
- If the patient was fasted for this study, the presence of ingesta within the gastric lumen could suggest delayed gastric emptying.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider pre-and postprandial serum bile acids, +/- a blood ammonia level to assess for hepatic encephalopathy as a possible cause for the patient's clinical signs.
- Consider Leptospirosis testing (i.e., blood and urine PCR, serology), particularly if the clinical suspicion for disease is high.
- Hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy) should be considered if clotting status is appropriate. Twenty-five gauge-needles should be used. Surgical biopsies are more likely to yield a definitive diagnosis. If pursued, aerobic and anaerobic bile cultures are recommended, along with acquisition of additional hepatic tissue samples for potential copper quantitation. If hepatic tissue sampling is not pursed at this time, consider empirical treatment for bacterial cholangiohepatitis with broad-spectrum antibiotics (i.e., amoxicillin-clavulanic acid, Denamarin, +/- Ursodiol). If not improvement in the liver values is seen within 5-7 days of initiating therapy, hepatic tissue sampling should be revisited.







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)
info@SonoPath.com