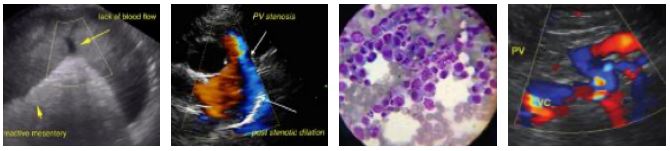
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Boog Copeman

SPECIES
Canine

BREED
Maltese mix

SEX
Male, neutered

AGE
8 Yrs.

WEIGHT
25.7 lbs.

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

IMAGING PERFORMED BY
Shari Reffi CVT

HOSPITAL NAME
Newton Vet

REFERRING VET
Dr. Colyer

INVOICE
13797

DATE
8/2/22

PRESENTING CLINICAL SIGNS

History: Vomiting episodes 9 days ago-resolved w/o intervention. V started again Sunday & Monday. Not eating. Current meds: Cerenia, Ampicillin, Metronidazole.
Abnormal PE/Chem/CBC/UA Results: TP 8.1 (7.6H); Globulin 5 (3.6H); Chol >450, Alt 2327 (120H); Alp 1848 (140H); GGT 91 (41H); TBili 5.9

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is 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 2 cm, are normal.

The prostate is normal in size (0.73 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (4.74 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is moderate loss of corticomedullary distinction. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (4.70 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is moderate loss of corticomedullary distinction. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.45 cm at cranial pole) (0.48 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.

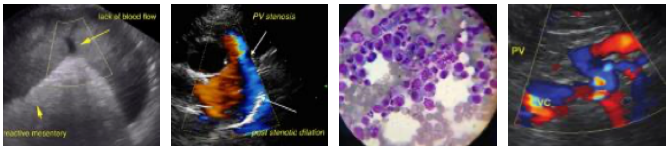
The right adrenal gland is normal size (0.63 cm at cranial pole) (0.47 cm at caudal pole) (1.49 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.47 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

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen with a homogeneous echogenicity and a coarse echotexture. There is a subtle increase in portal markings. 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 gallbladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The common bile duct is borderline dilated (0.40 cm in diameter). The duodenal papilla is



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normal in size (0.36 cm in width).

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 diffusely prominent in size with slightly irregular peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat and subtly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated. The mesentery effacing the serosal surface is hyperechoic.

Free Abdomen

There is no evidence of free fluid. A 1.15 cm medial iliac lymph node is visualized. 1-2 small cystic areas are observed at the caudal aspect. The remaining glandular echogenicity and detail are normal.

Other

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

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

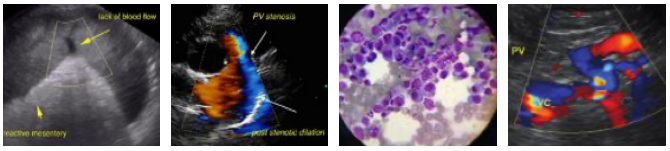
- The hepatic parenchymal changes are non-specific and could be associated an inflammatory hepatopathy (i.e., bacterial cholangiohepatitis, chronic active hepatitis), hepatotoxicity, Leptospirosis, or other hepatopathy). Infiltrative neoplasia is possible but considered less likely based on the sonographic changes.
- The mild common bile duct dilation may be secondary to an extraluminal obstruction (i.e., pancreatitis, stricture) vs an intraluminal obstruction (less likely).
- The pancreatic changes could be consistent with mild to moderate acute or chronic active pancreatitis.

Secondary Findings:

- Bilateral chronic renal changes with dystrophic mineralization.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Leptospirosis testing (i.e., blood and urine PCR, serology) is recommended.
- Consider hepatic tissue sampling (i.e., fine needle aspirate or surgical biopsy) to get a definitive diagnosis. Surgical biopsies are preferred in that they are more likely to be representative of global organ pathology. Hepatic cytology is more useful in identifying infiltrative neoplasia and



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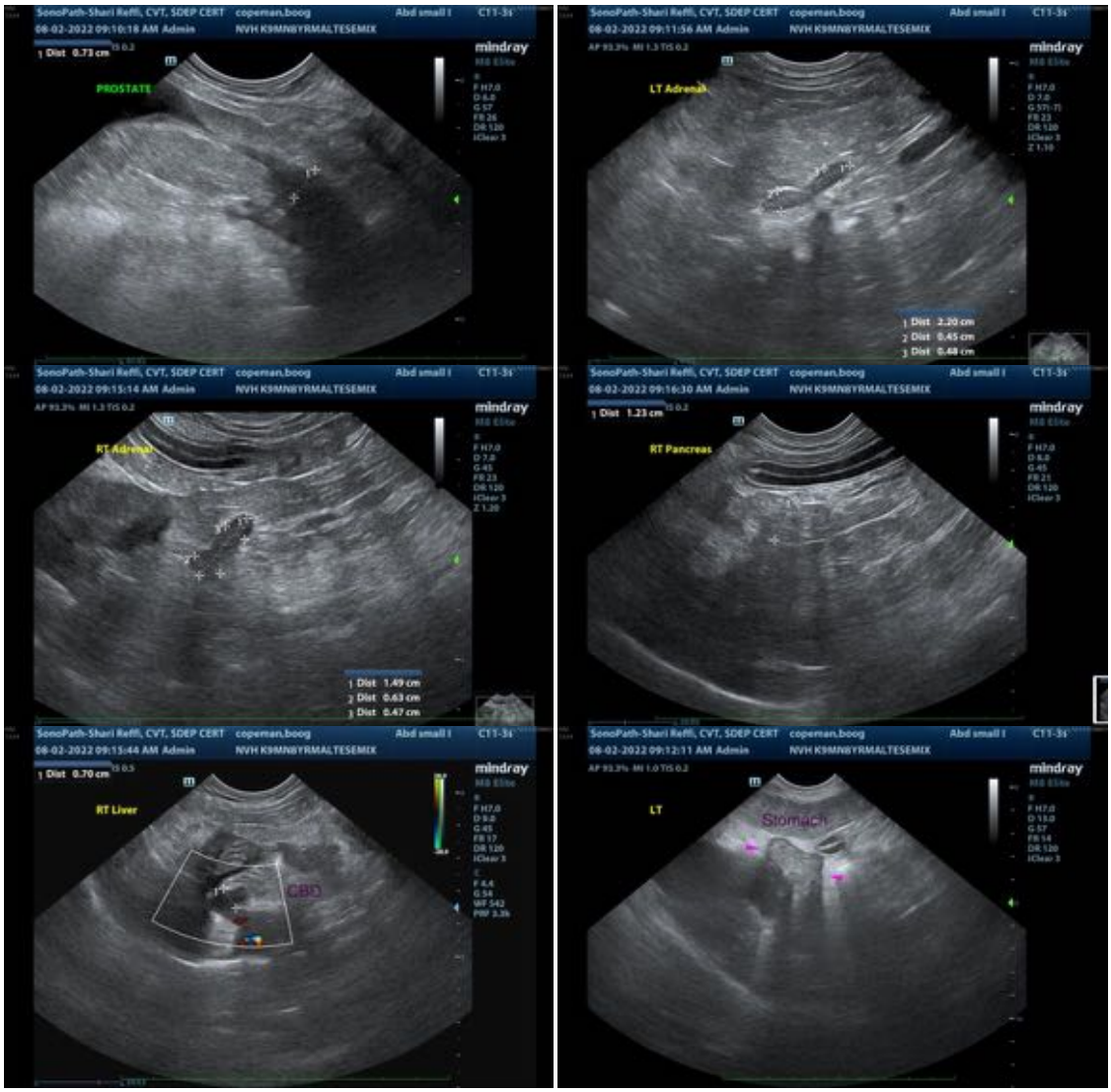
vacuolar hepatopathy but tends to be less beneficial for diagnosing other hepatopathies. If surgery is pursued, aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation are recommended. Thoracic radiographs and clotting times should be performed prior to these procedures.

- If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin +/- metronidazole). 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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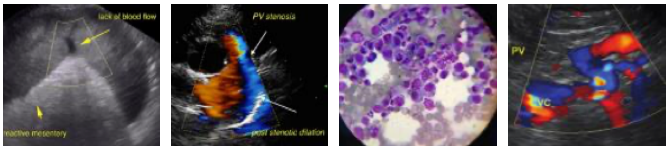

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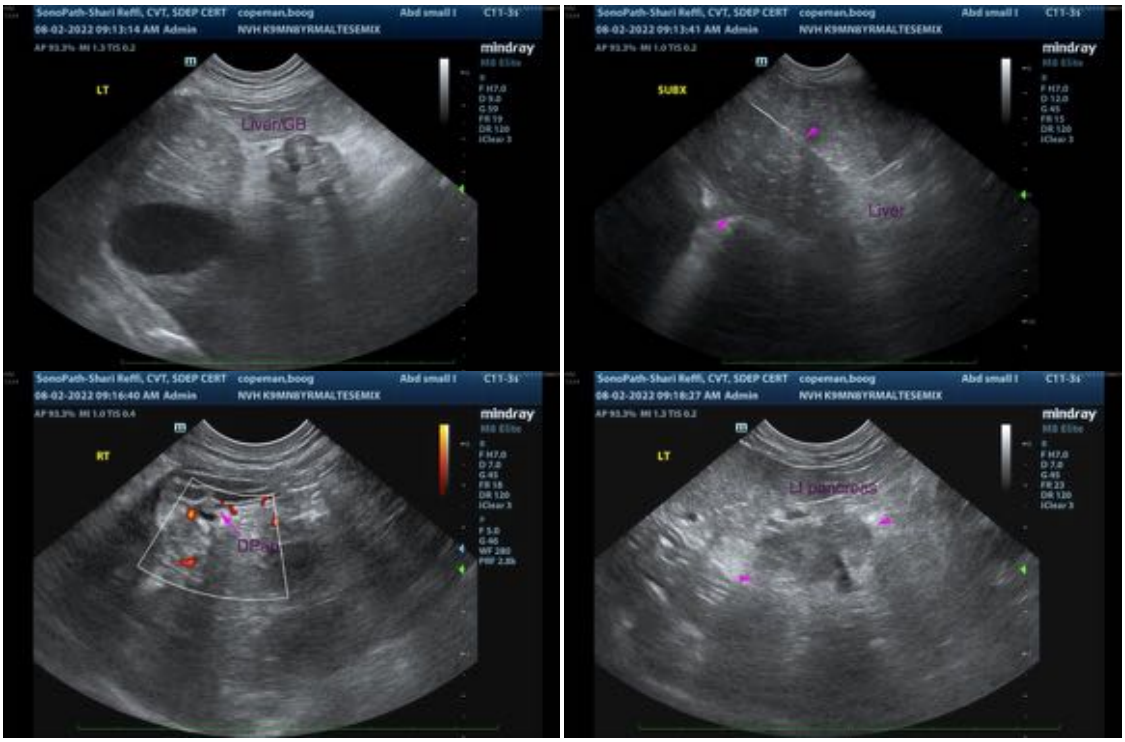

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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