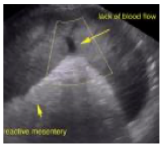
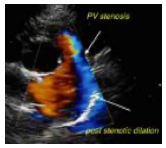
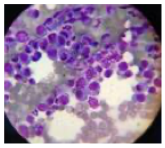
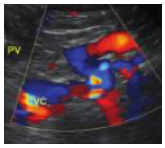
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT
Bella Meneve

SPECIES
Canine

BREED
Shih Tzu Mix

SEX
Spayed Female

AGE
10 years

WEIGHT
15 lbs

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

IMAGING PERFORMED BY
Kelly Vazquez

HOSPITAL NAME
North Haledon VC

REFERRING VET
Dr. Bennett Goldstein

INVOICE
11409

DATE
8.15.22

PRESENTING CLINICAL SIGNS

History: Patient with history of controlled diabetes (on Vetsulin), presents due to an increase in liver enzymes over the past 9 months. No change after treatment with antibiotics. No vomiting or diarrhea, bile acids was declined. Current meds: Vetsulin and Denamarin.

Abnormal PE/Chem/CBC/UA Results: ALT= 1/22: 145, 6/22: 733, 8/22: 1,099. 8/22= ALT: 1,099, AST: 174, ALP: 909, chol.: 709, trig.: 497. CBC: WNL. Fructosamine: Fairly regular: 440.

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 **left kidney** is mildly enlarged (3.93 cm in length); with a slightly irregular shape. normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal

In the one still image available for interpretation, the **right kidney** is normal in size (4.86 cm in length); with a slightly irregular shape. The parenchyma appears mildly heterogenous with some loss of glandular detail. No distinct focal lesions are observed.

Adrenal Glands

In the one still image is available for interpretation, the **left adrenal gland** is mildly enlarged (0.62 cm at cranial pole) (0.62 cm at caudal pole) (1.69 cm in length);

The **right adrenal gland** is normal size (0.84 cm at cranial pole) (0.56 cm at caudal pole) (1.61 cm in length); borderline enlarged; 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 (1.03 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 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** is moderately distended. The wall is normal in thickness. A small polypoid lesion is arising from the luminal surface. In addition, a moderate amount of aggregated, echogenic, mostly gravity dependent debris/sludge is observed within the lumen. 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. 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

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 diffuse hepatopathy. Differentials include inflammatory hepatopathy (i.e., chronic active hepatitis, bacterial cholangiohepatitis), hepatotoxicosis, Leptospirosis, infiltrative neoplasia (less likely), fibrosis, other hepatopathy, +/- concurrent age-related change (i.e., vacuolar hepatopathy)

Secondary Findings

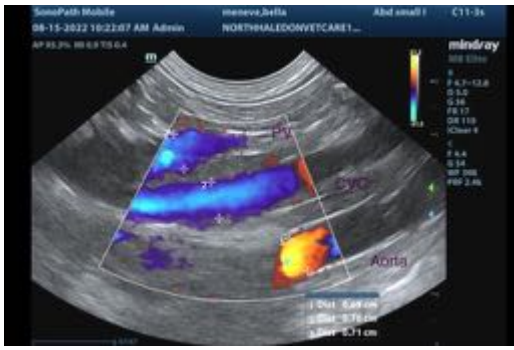
- Minor bilateral adrenomegaly
- Bilateral, age-related degenerative renal changes
- Gall bladder sludge, non-mucocele

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Consider Leptospirosis testing (i.e., blood and urine PCR, serology), given that the clinical suspicion for disease is high.

Pre-and postprandial serum bile acids would be useful in assessing hepatic function. 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, acquisition of additional hepatic tissue samples for potential copper quantitation, as well as aerobic and anaerobic bile cultures are recommended. Prior to anesthesia, three-view thoracic radiographs and clotting times (PT/PTT) should be performed.

While awaiting test results, consider initiation of a more broad-spectrum antibiotic along with hepatic antioxidants (i.e., Denamarin, Ursodiol).


PV
CVC
Aorta


LAD


STOM


RAD

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