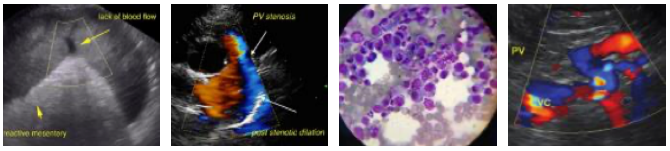
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Missy Oddie

SPECIES
Canine

BREED
Chihuahua mix

SEX
Female, spayed

AGE
10 Yrs. 5 months

WEIGHT
7.8 kg.

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

IMAGING PERFORMED BY
Stan Gira

HOSPITAL NAME
Resolution Veterinary Ultrasound

REFERRING VET
Dr. Plett

INVOICE
14566

DATE
2/7/23

PRESENTING CLINICAL SIGNS

History: Previous targeted ultrasound done in Oklahoma 1 month ago. RDVM concerned about enlarged GB . Currently on Ursodiol 250mg - 1/2 SID
Abnormal PE/Chem/CBC/UA Results: Elevated liver enzymes ALP 433 (20-150) ALT 424 (10-118) rest unremarkable

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 normal in size (4.68 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

The right kidney is normal size (5.10 cm in length); normal shape and architecture with smooth peripheral margins. 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.

Adrenal Glands

The left adrenal gland is mildly enlarged (0.51 cm at cranial pole) (0.72 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 (0.59 cm at cranial pole) (0.52 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.

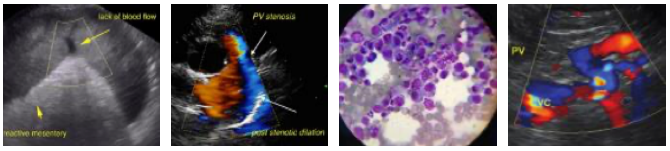
Spleen

The spleen is prominent in size (1.66 cm in width at the level of the hilus) with normal curvilinear peripheral margins and a folded contour. The parenchyma is subtly mottled in appearance. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature 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 lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated echogenic to mineralized partially dependent to suspended debris/sludge is observed within the lumen. The echogenic material is in a partially stellate pattern. The cystic and common bile ducts are normal/not seen.

Gastrointestinal



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The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. 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 ileocecocolic junction and colonic wall are normal. No obstructive disease is noted.

Pancreas

The base and limbs of the pancreas are normal in size 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. A few prominent mesenteric lymph nodes are visualized, the largest measuring 0.82 cm in length. The nodes are normal in shape and echogenicity.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- The gallbladder changes are suggestive of an emerging mucocele.
- Non-specific diffuse hepatopathy. Differentials include inflammatory disease (i.e., bacterial cholangiohepatitis, chronic hepatitis), hepatotoxicosis (i.e., copper), Leptospirosis (less likely if the liver enzyme elevations are chronic in nature), other hepatopathy +/- concurrent benign age-related change (i.e., vacuolar hepatopathy, regenerative nodular hyperplasia).

Secondary Findings:

- Mild bilateral, age-related renal changes with left dystrophic mineralization.
- The mild left adrenomegaly may be a normal variant for this patient or may represent early hyperplastic change.
- The splenic parenchymal changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis, splenitis or antigenic stimulation with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).
- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

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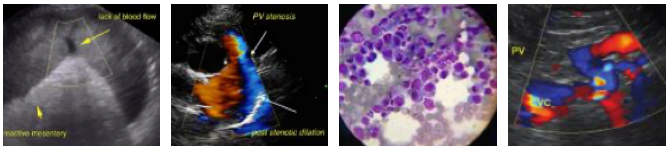

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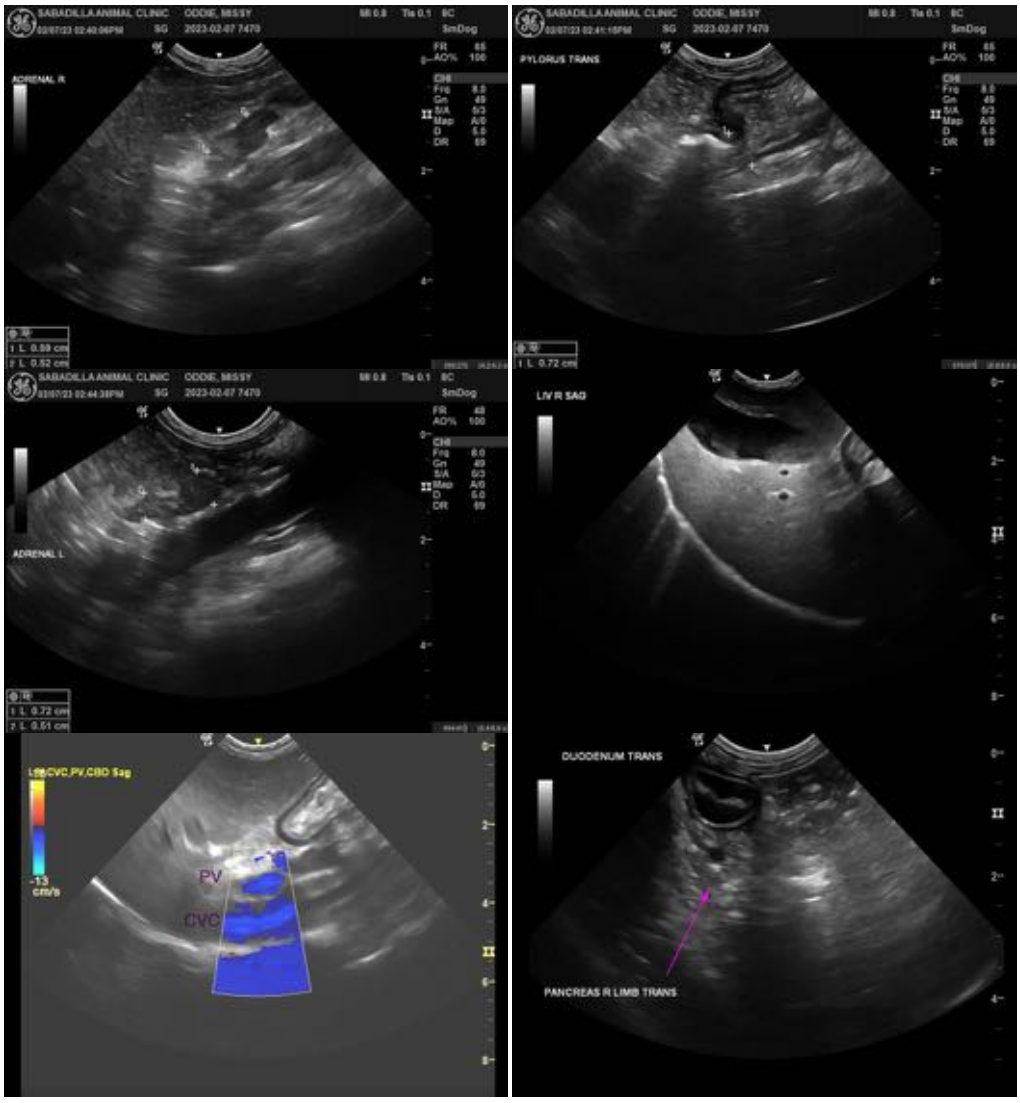
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Continuation of Ursodiol therapy is recommended given the gallbladder changes.
- Given the elevated liver enzymes, also consider the following:
  1. Pre and post prandial serum bile acids.
  2. Hepatic tissue sampling (i.e., fine needle aspirate or biopsies). If biopsies are pursued, aerobic and anaerobic bile cultures are recommended along with hepatic copper quantitation. Clotting times should be performed prior to hepatic tissue sampling.
  3. Leptospirosis testing, particularly if the liver enzyme elevations are acute in nature.
- Given the patient's age, thoracic radiographs are recommended prior to any anesthetic event.



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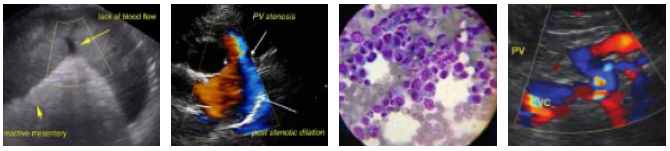

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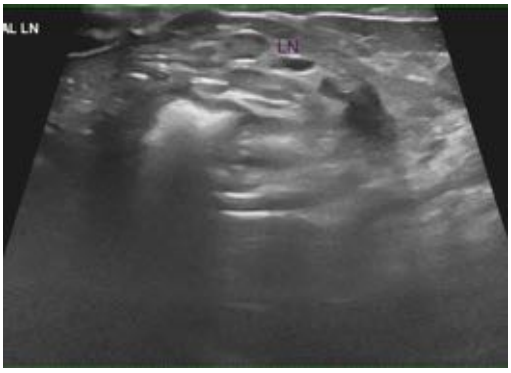

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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