SonoPath
Clinical Sonography & Telecytology
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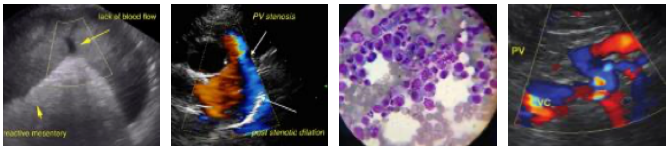

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Molly Mann

SPECIES
Canine

BREED
Shih Tzu

SEX
Female, spayed

AGE
5 Yrs.

WEIGHT
11 lbs.

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

IMAGING PERFORMED BY
Sonya Myers DVM

HOSPITAL NAME
VCA Clemont AH

REFERRING VET
Dr. Blossey

INVOICE
14599

DATE
2/15/23

PRESENTING CLINICAL SIGNS

History: Elevated liver enzymes. On Denamarin

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 left kidney is normal size (3.60 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. A thin hyperechoic medullary band is observed at the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (3.45 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. A thin hyperechoic medullary band is observed at the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is normal size (0.58 cm at cranial pole) (0.48 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 (0.81 cm at cranial pole) (0.58 cm at caudal pole) with a slightly irregular shape. A 0.81 x 0.78 cm hyperechoic nodule is observed at the cranial pole. The glandular echogenicity and detail at the caudal pole are unremarkable. Surrounding vasculature appears normal.

Spleen

One still image is available for interpretation. In the visualized section, the spleen appears normal in size (0.65 cm in width at the level of the hilus) with homogeneous parenchyma. No obvious abnormalities are seen.

Liver

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The gallbladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal.

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.

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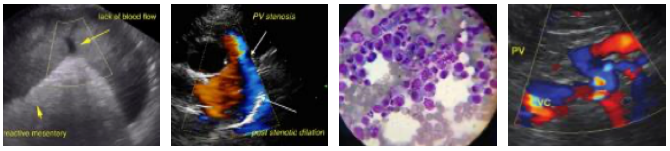

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Pancreas

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

Trace free fluid is observed post fine needle aspirate of the liver. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, infiltrative neoplasia (less likely)) should be considered.
- Gallbladder debris- incidental.

Secondary Findings:

- Bilateral chronic renal changes.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- The right adrenal nodule could be consistent with benign nodular hyperplasia or an emerging tumor (i.e., adenoma, adenocarcinoma, pheochromocytoma).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider pre and post prandial serum bile acids to assess hepatic function. If liver enzyme elevations are acute in nature, also consider Leptospirosis testing (i.e., blood and urine PCR, serology).
- If the above diagnostics and hepatic cytology are inconclusive, liver biopsies (i.e., laparoscopic or surgical) may be necessary to get a definitive diagnosis. If pursued, aerobic and anaerobic bile cultures should be obtained and copper quantitation performed. Thoracic radiographs are recommended prior to anesthesia.

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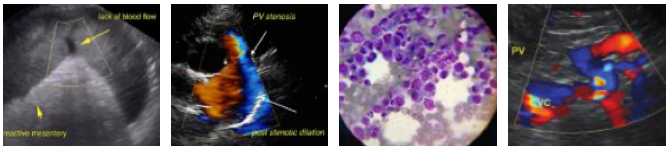

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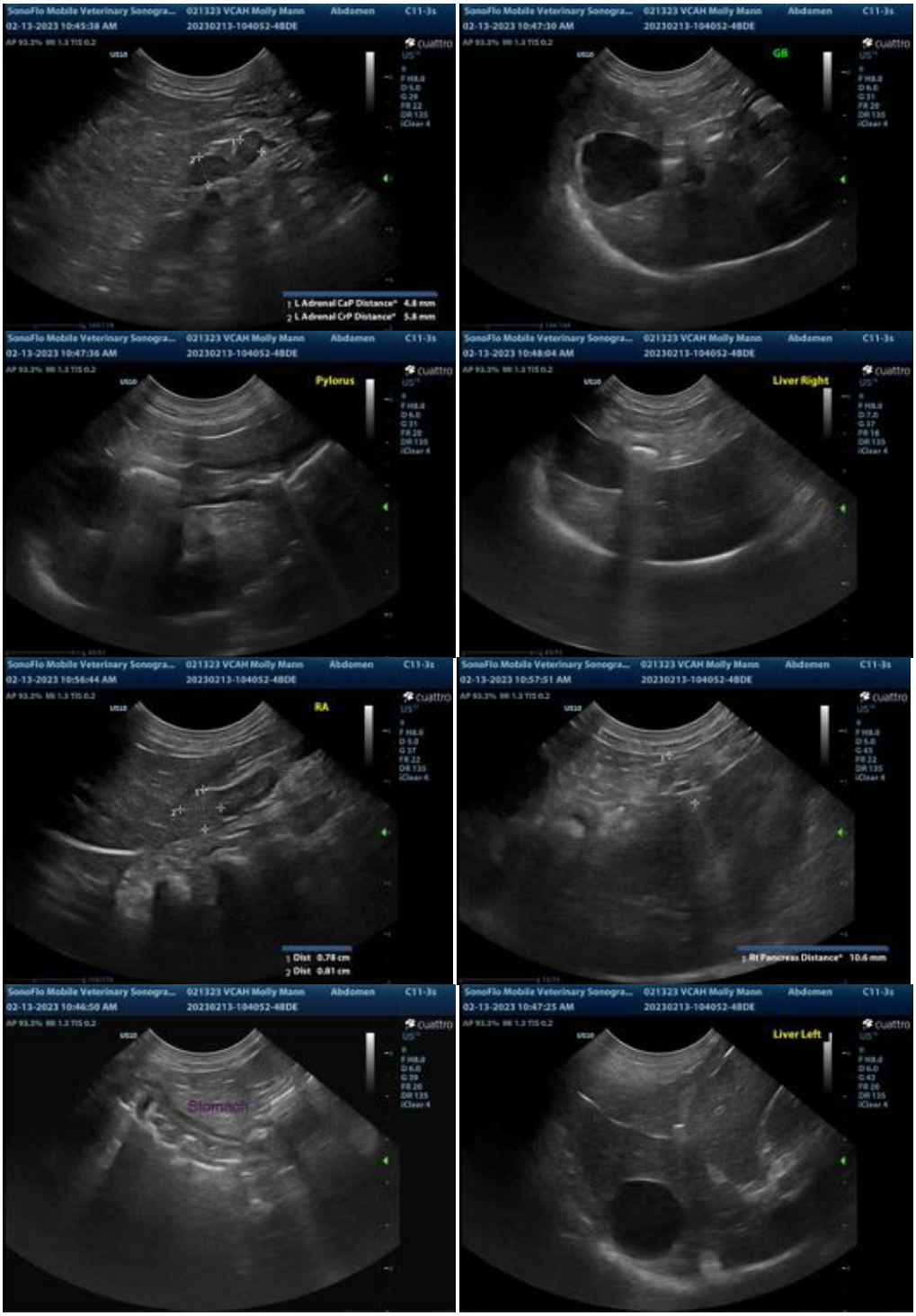

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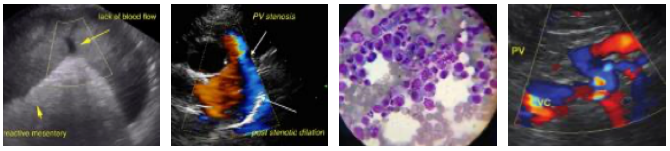

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
info@SonoPath.com