SonoPath
Clinical Sonography & Telecytology
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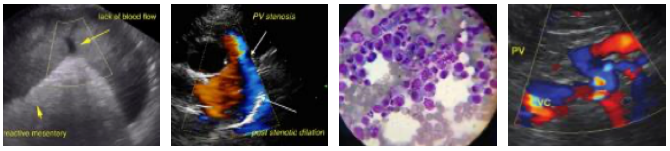

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Elliott Lochli

SPECIES
Canine

BREED
Chihuahua mix

SEX
Male, neutered

AGE
5 Yrs.

WEIGHT
7.3 kg.

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

IMAGING PERFORMED BY
Dr. Barthelemy

HOSPITAL NAME
Signal Hill AC

REFERRING VET
Dr. Devall

INVOICE
14867

DATE
5/1/23

PRESENTING CLINICAL SIGNS

History: Started vomiting and became lethargic. Dietary indiscretion is possible. On IVF in clinic with some clinical improvement.
Abnormal PE/Chem/CBC/UA Results: Marked ALT elevation at 1800. Mild ALP and GGT elevation. Bile acids normal. Spec CPL normal.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (1.12 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (3.80 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is normal size (0.44 cm at cranial pole) (0.45 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 (0.52 cm at cranial pole) (0.47 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 subjectively normal in size (0.54 cm in width at the level of the hilus) with normal curvilinear peripheral contours. The parenchyma is subjectively mildly hypoechoic. No focal lesions are observed. Splenic vasculature is normal with no evidence of thrombosis.

Liver

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and homogeneous in appearance. No focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. 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 partially dependent sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

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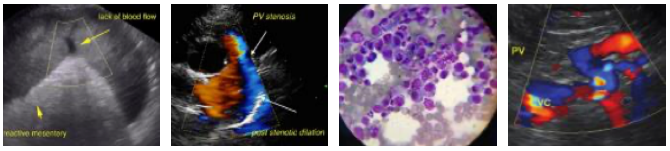

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The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The 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 base/right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is mildly hyperechoic 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. The abdominal lymph nodes are normal/not visible.

Other

A brief visualization of the heart reveals no obvious evidence of pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

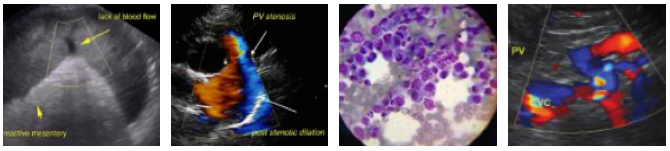
- An obvious cause for the patient's elevated ALT is not definitively identified in this study. Given the patient's age and sonographic appearance of the liver, the top differentials could include infection (i.e., bacterial cholangiohepatitis, Leptospirosis), hepatotoxicity, infiltrative neoplasia (less likely), chronic hepatitis (less likely), other hepatopathy.
- Gallbladder sludge- non-mucocele.

Secondary Findings:

- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Leptospirosis testing (i.e., blood and urine PCR, serology) is recommended.
- Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
- If a more conservative approach is desired, consider empirical treatment for cholangiohepatitis/Leptospirosis/hepatotoxicity with amoxicillin-clavulanic acid along with hepatic antioxidants. If liver values do not begin to improve within 7-10 days of initiating therapy, antibiotics should be discontinued and hepatic tissue sampling reconsidered. If values do improve, a 4–6-week course of treatment is recommended.



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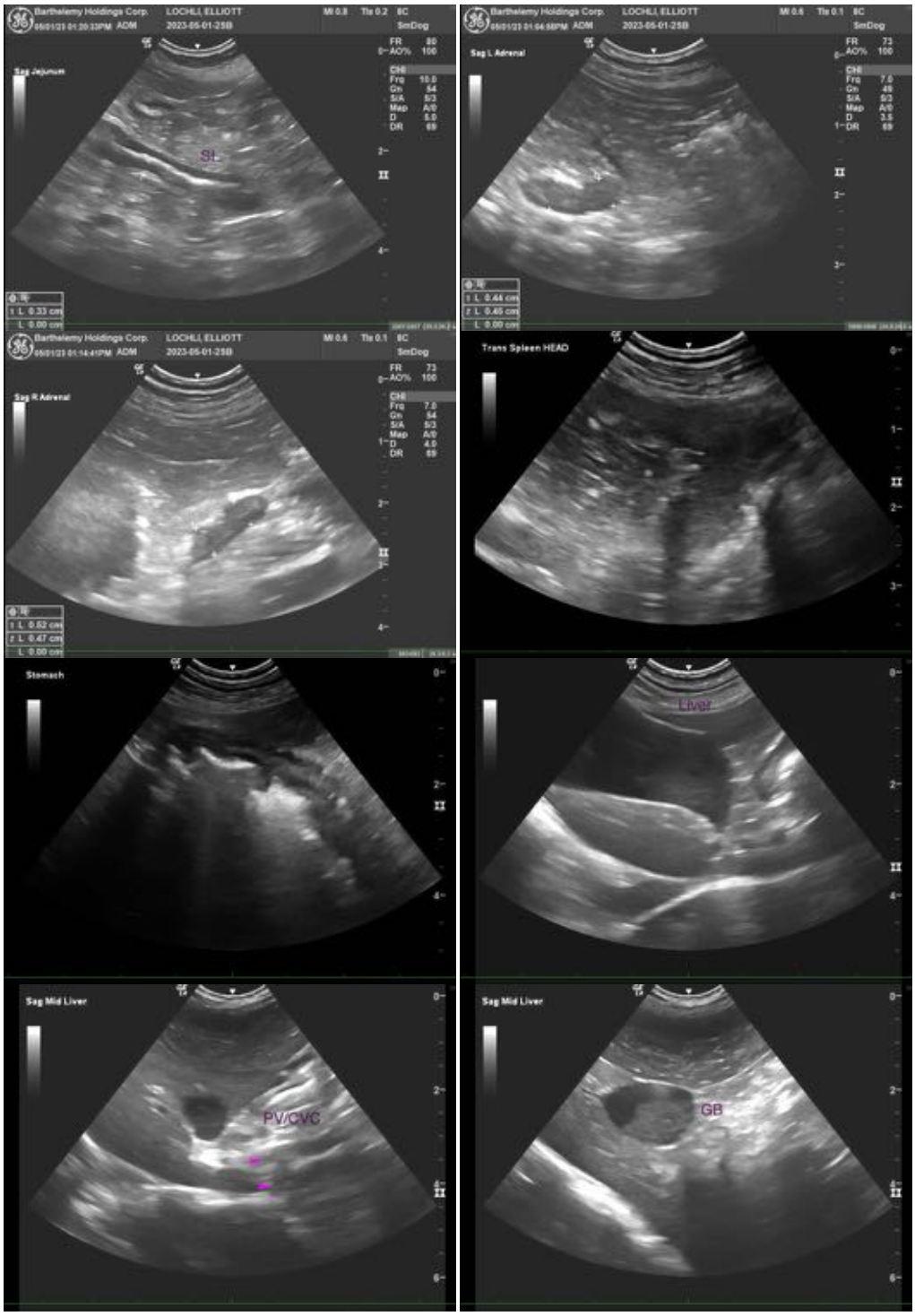
- Serial monitoring of the patient's liver enzymes is recommended to assess for progression of disease.



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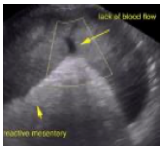
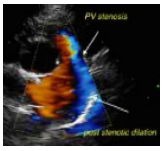
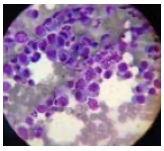
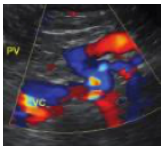

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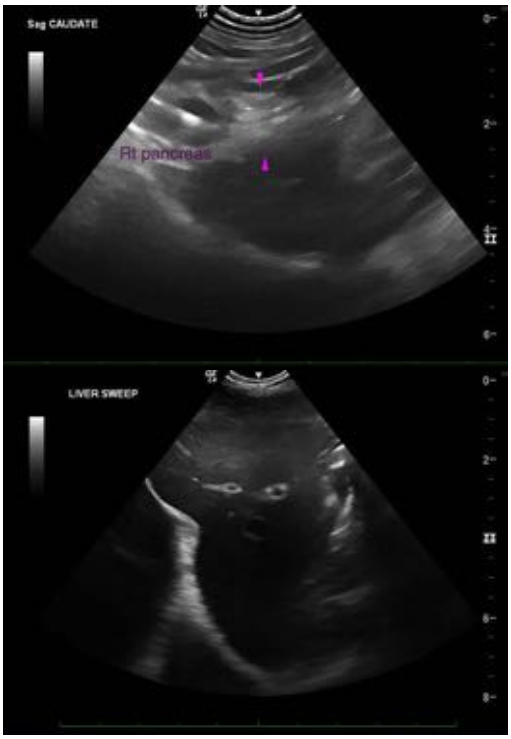

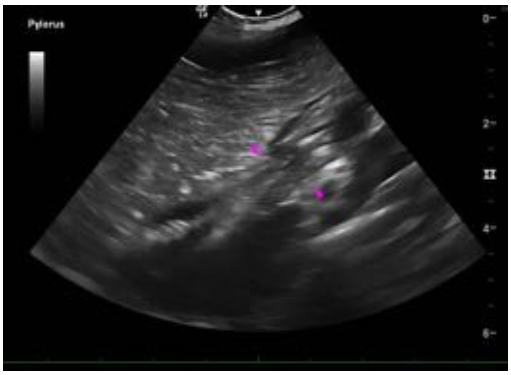

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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