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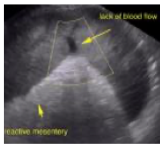
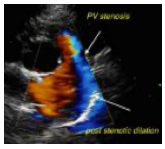
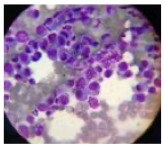
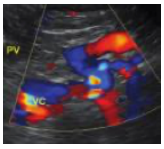

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1-800-838-4268 info@sonopath.com

PATIENT

Bella Taylor Pacheco

SPECIES

Canine

BREED

Shih Tzu

SEX

Female Spayed

AGE

8 years

WEIGHT

12.2 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ferrer, DVM

HOSPITAL NAME

Paseos VC

REFERRING VET

Dr. Rafael Charneco

INVOICE

13735

DATE

7.19.23

PRESENTING CLINICAL SIGNS

History: Presented as a referral for an abdominal ultrasound for liver evaluation. The patient has a previous history of hepatopathy, with abnormal blood chemistry results present on the last visit. Also has a history of pancreatitis and gastritis. PT is on Denamarin SID PO x 30 days. On 7-13-23 was treated with Metronidazole, Cerenia inj, and tabs, EN diet. Pt is currently on Vaccines and HW prevention.
Abnormal PE/Chem/CBC/UA Results: CHEM: ALKP 909 ALT 336 Bile acids perform on Dec 2022 pre-elevated 19.3 and post 9.6 (normal). Cushing testing on Dec 2022 cortisol pre 1.4 (1-5), cortisol 1hr: 0.20 (0-1.4), cortisol post 2hr 0.3 (0-1.4),

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 region of the trigone and visible portion of the proximal urethra are normal.

The left kidney is normal in size (3.85 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal in size (4.13 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is normal in size (0.32 cm at cranial pole) (0.38 cm at caudal pole) (1.59.x cm in length) with a normal shape and 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 in size (0.71 cm at cranial pole) (0.49 cm at caudal pole) (1.42 cm in length) with a normal shape and 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 (0.85 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 appears normal.

Liver

The liver is normal to slightly prominent 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 gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of adhered echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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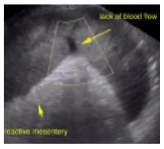
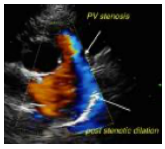
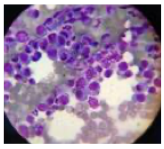
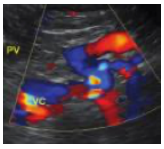

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Gastrointestinal

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 is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecocolic junction and colonic wall are normal. The colonic lumen contains shadowing fecal material. There is no evidence of an obstructive pattern.

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

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

- 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)) cannot be excluded.

Secondary Findings

- Mild bilateral nonspecific chronic renal changes
- Minor age-related pancreatic remodeling

*The elevated pre-bile acids (with normal post-bile acids) may represent premature contraction of the gallbladder or hepatic dysfunction. Premature gallbladder contraction is favored. Regarding the low-dose dexamethasone suppression test, results are normal. This finding in the absence of appropriate clinical signs and normal adrenal size makes Cushing's disease less likely. Therefore, a primary hepatopathy is favored.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider Leptospirosis testing, particularly if the clinical suspicion for this disease is high. However, if the liver enzyme elevations are chronic, Leptospirosis would be a less likely cause of the patient's hepatopathy.
- Given the lack of response to hepatic antioxidants and metronidazole, the next step would be to consider hepatic tissue sampling (i.e., fine-needle aspirate or biopsies (i.e., laparoscopic, or surgical)). Clotting times and thoracic radiographs should be performed prior to anesthesia. If surgical biopsies are pursued, hepatic copper quantitation should be performed, along with aerobic and anaerobic bile cultures.

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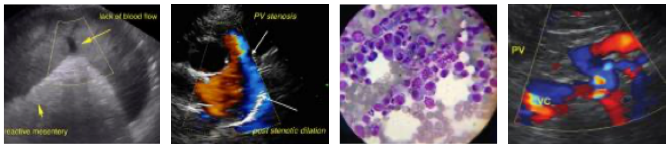

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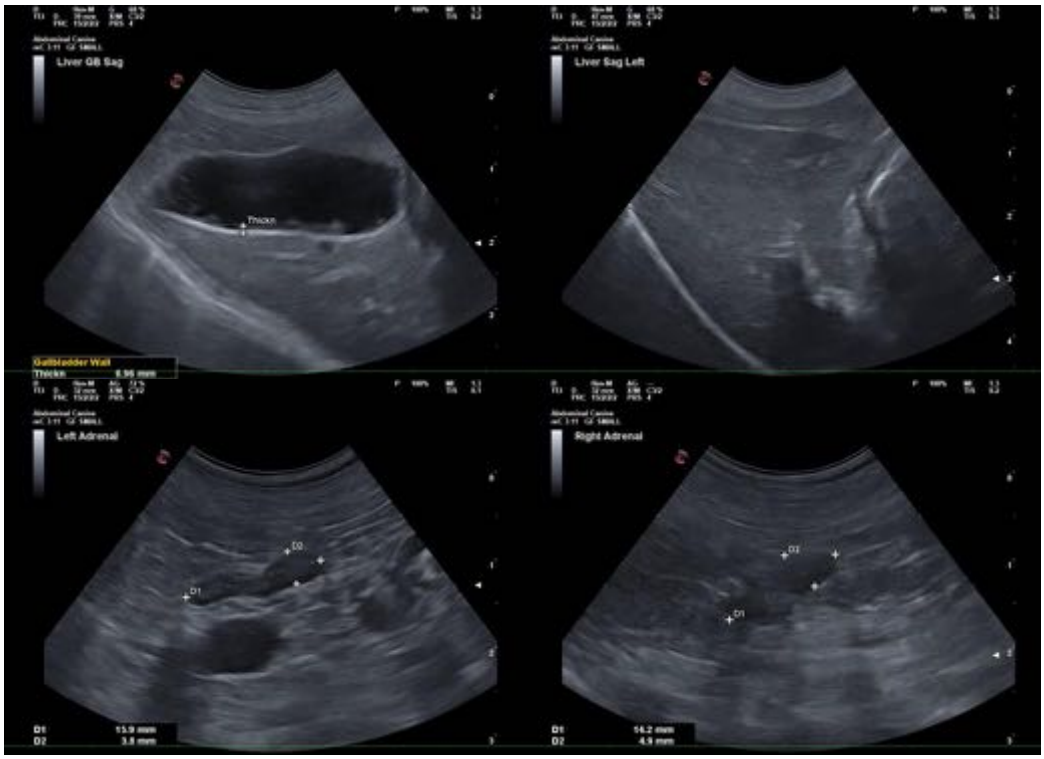

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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