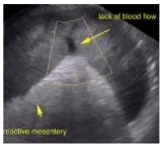
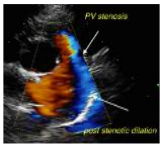
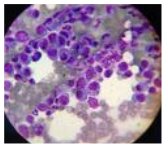
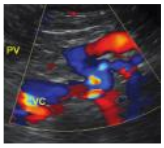
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™





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

PATIENT

Shantal Colon

SPECIES

Canine

BREED

Mixed

SEX

Spayed Female

AGE

12 years

WEIGHT

28lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ferrer, DVM

HOSPITAL NAME

Paseos VC

REFERRING VET

Dra. Sheila Henriquez

INVOICE

12270

DATE

2.23.23

PRESENTING CLINICAL SIGNS

History: The patient was presented as a referral for an abdominal ultrasound to evaluate the abdomen due to a history of losing weight and elevation of liver enzyme. BCS 1/5

Abnormal PE/Chem/CBC/UA Results: PE: BCS 1/5 BW: CBC: 02-01-2023 RBC 5.04 (5.50-8.50) HGB: 9.5 (12.0-18.0) HCT: 32.15 (37.0-55.0) WBC 28.75 (6.0-17.0) NEU: 26.34 (3.0-12.0) 02-17-2023 RBC 5.39 (5.50-8.50) HCT: 34.54 (37.0-55.0) HBG: 10.1 (12.0-18.0) PLT: 590 (165-500) NEU: 13.98 (3.0-12.0) CHEM: 02-01-2023 ALB: 2.3 (2.5-4.4) ALP: 358 (20-150) BUN: 7 (7-25) 02-17-2023 ALB 2.3 (2.5-4.4) ALP: 260 (20-150) BUN: 6 (7-25)

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. A small amount of suspended, echogenic debris is observed within the lumen. No masses, inflammatory changes or calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

The left kidney is normal in size (6.47 cm in length) with a normal shape, architecture and 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.

The right kidney is normal in size (6.61 cm in length) with a normal shape, architecture and 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 normal in size (0.58 cm at cranial pole) (0.65 cm at caudal pole) (2.56 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 in normal size (1.22 cm at cranial pole) (0.73 cm at caudal pole) (2.63 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 (1.50 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 prominent in size with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen. Several hyperechoic nodules are observed throughout the organ (the largest measuring approximately 1.58 cm in diameter). Hepatic vasculature and intrahepatic 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 scant amount of suspended, echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

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 retention of the normal layering pattern. There is evidence of subtle mucosal fogging in some segments. Discreet masses are not identified. The ileocecocolic junction and colonic wall are 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

There is no obvious evidence free fluid. A few prominent medial iliac lymph nodes are visualized (the largest measuring 2.17 cm in length). The nodes are slightly rounded. One to two prominent mesenteric lymph nodes are also seen (the largest measuring 0.98 cm in length).

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Given the patient's clinical history and sonographic changes, a protein-losing enteropathy is suspected. Top differentials include inflammatory bowel disease, lymphangiectasia, infectious/parasitic disease or less likely, infiltrative neoplasia.

- The prominent abdominal lymph nodes could be consistent with reactive change or emerging neoplasia (i.e., lymphoma).

- The hepatic parenchymal changes are nonspecific and trend toward the benign (i.e., vacuolar hepatopathy and/or regenerative nodular hyperplasia) with a lower possibility of inflammatory disease or infiltrative neoplasia.

Secondary Findings

- Minor bilateral age-related renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Further work-up for a protein-losing enteropathy could include the following:

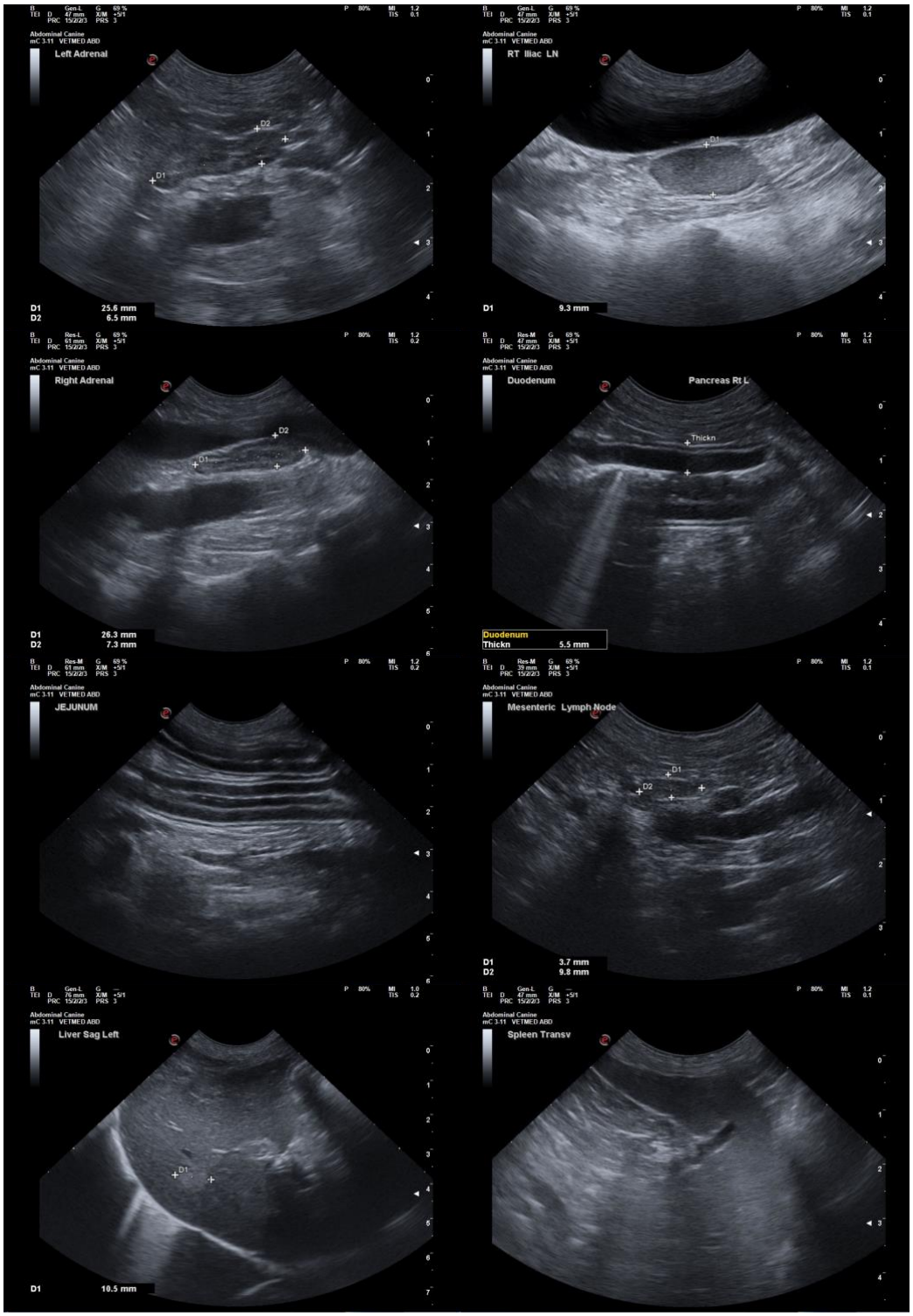
    1. Fecal evaluation for ova and Giardia
    2. GI panel including serum cobalamin and folate, TLI and PLI
    3. Low-fat limited antigen diet trial
    4. Initiation of a probiotic
    5. GI biopsies (i.e., endoscopic or surgical)

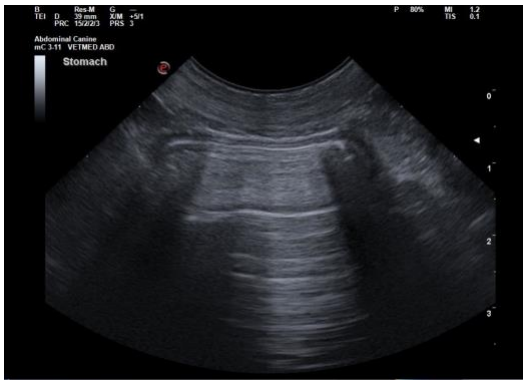
- To further evaluate for concurrent causes of hypoalbuminemia, consider the following:

    1. UPC (if protein is present on a urine dipstick)
    2. Resting cortisol level to screen for atypical hypoadrenocorticism.
    3. Pre-and postprandial serum bile acids to assess for occult hepatic dysfunction

- Regarding the prominent abdominal lymph nodes, consider a fine-needle aspirate (if accessible). Otherwise, a repeat ultrasound should be considered in 2-3 weeks to assess for progression.

- Regarding the elevated ALP, serial monitoring (i.e., every 3 months) of the patient's liver values is recommended to assess for progression.





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