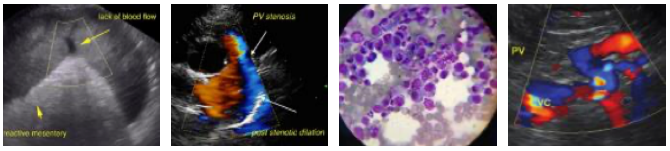
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Ozzie Cuff

SPECIES
Canine

BREED
Yorkipoo

SEX
Male, neutered

AGE
11 Yrs.

WEIGHT
6.9 kgs.

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

IMAGING PERFORMED BY
Amy Mayhew

HOSPITAL NAME
SVS Imaging Michigan

REFERRING VET
Dr. Schecter

INVOICE
14871

DATE
5/1/23

PRESENTING CLINICAL SIGNS

History: Acute 24-hour history of lethargy, soft stool, inappetence. Chronic history of suspected pancreatitis
Abnormal PE/Chem/CBC/UA Results: Pale Mucous membranes, generalized muscle wasting. Hypoproteinemia (hypoalbuminemia), scant peritoneal effusion.

Hematocrit 35%, mild leukocytosis with a neutrophilia, albumin 1.4, globulin 2.6.

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 visible portion of the proximal urethra are normal.

The prostate is normal in size (0.79 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 (5.12 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. A 0.28 cm cortical cyst is seen. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (5.53 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 borderline enlarged (0.63 cm at cranial pole) (0.54 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 mildly enlarged (0.87 cm at cranial pole) (0.62 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 normal in size (1.28 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A few small ill-defined hyperechoic nodules/areas are observed. Splenic vasculature is normal.

Liver

The liver is 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 large amount of aggregated echogenic suspended sludge in a stellate pattern is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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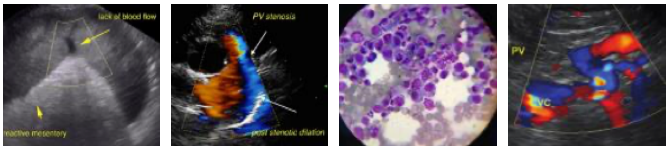

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Gastrointestinal

The gastric lumen is mildly fluid 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 borderline thickened (up to 0.41 cm) with retention of the normal layering pattern. There is evidence of mucosal striations in several segments. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

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

The mesentery throughout the abdomen is hyperechoic, particularly at the cranial aspect. Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

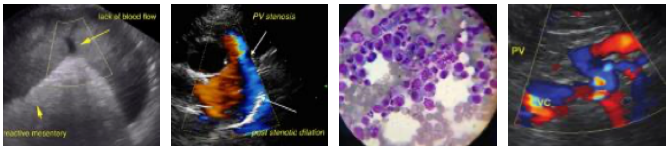
- The patient's clinical history, in conjunction with the small intestinal wall changes, are most concerning for a protein-losing enteropathy. Top differentials include lymphangiectasia, inflammatory bowel disease, infectious/parasitic disease or less likely, infiltrative neoplasia (i.e., lymphoma).
- The gallbladder changes are consistent with a fully formed mucocele.
- Diffuse peritonitis is present, likely secondary to ascites/bowel pathology.

Secondary Findings:

- Mild bilateral adrenomegaly.
- The hyperechoic splenic lesions are most consistent with a benign process (i.e., myelolipomas) with a low possibility of a neoplastic process.
- The hepatic parenchymal changes are non-specific and are most consistent with vacuolar hepatopathy (i.e., endocrine, idiopathic). Inflammatory disease and infiltrative neoplasia are possible but considered less likely, particularly in light of the normal liver enzymes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Regarding the patient's clinical history, consider the following:
  1. A fecal evaluation for ova/Giardia.
  2. Prophylactic deworming with Fenbendazole.
  3. Initiation of a low-fat, hypoallergenic diet.
  4. A probiotic +/- fiber supplement (i.e., Psyllium) may prove beneficial.



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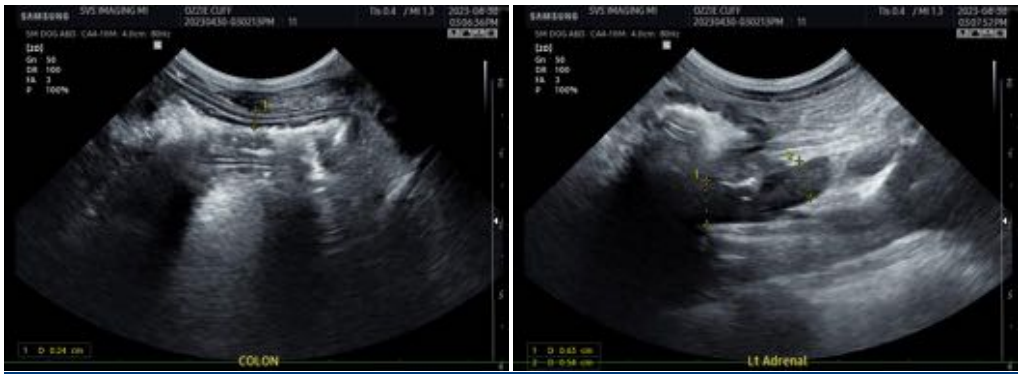
5. A resting cortisol level can be considered to screen for hypoadrenocorticism. However, in light of the mildly enlarged adrenal glands, this differential is considered unlikely.
6. A malabsorption panel including serum cobalamin, folate, TLI and PLI should also be considered (send to Texas A&M).
7. Depending on the results of the above diagnostics/therapeutics, endoscopic or surgical GI biopsies may be necessary to get a definitive diagnosis.

- Regarding the gallbladder mucocele, a prophylactic cholecystectomy should be considered. If pursued, GI biopsies can be obtained at the time of surgery. If a cholecystectomy is not pursued at this time, Ursodiol therapy is recommended with serial sonographic monitoring (i.e., every 4-6 weeks) of the patient's gallbladder is recommended to assess for progression. The client should be warned of the potential for gallbladder rupture with subsequent bile/septic peritonitis.



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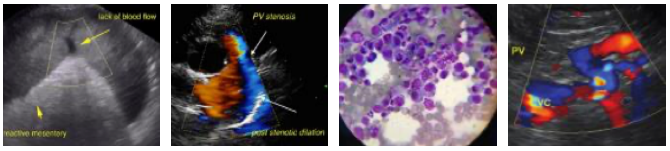

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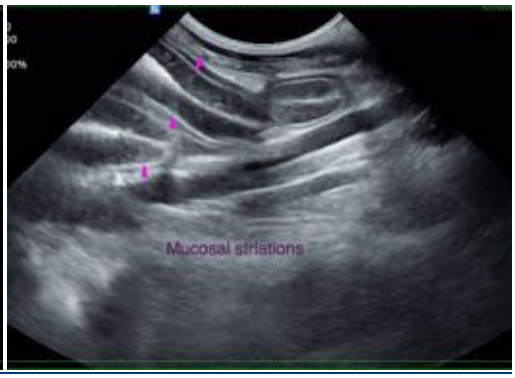

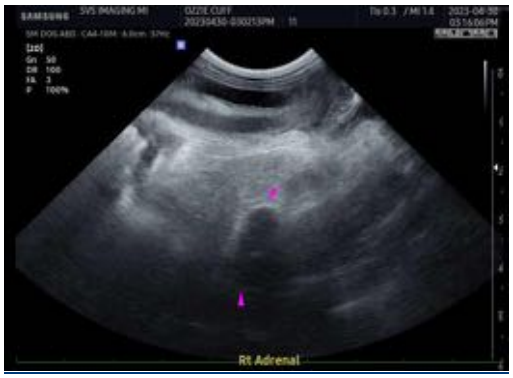

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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