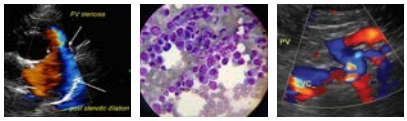
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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DATE

6/28/23

PATIENT

Stella Vieweg

SPECIES

Canine

BREED

Yorkshire Terrier X

SEX

Intact Female

AGE

4/17/15

WEIGHT

15.5 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Airpark AH

REFERRING VET

Dr. Marciszewski

INVOICE

43521

PRESENTING CLINICAL SIGNS

Long-standing chronic soft stool/diarrhea. Recent blood panel at another vet identified low blood albumin and protein losing enteropathy is suspected. Recommend abdominal ultrasound screening.

Current Medications: Only on fortiflora right now
Lab Results: Total protein 3.8, Albumin 1.5
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (4.79 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.48 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.62 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.48 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Duodenum wall measures 0.58 cm. Jejunum wall measures 0.53 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

There is a moderate amount of anechoic free fluid. No lymphadenopathy noted. The omentum is diffusely mildly hyperechoic.

Other

The ovaries and uterine body are visualized and appear within normal limits.

ULTRASONOGRAPHIC FINDINGS

- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. the significance of this is unclear if liver enzyme values are normal.

- Diffusely thickened small intestine with mucosal fogging and speckling – The bowel wall thickening could be consistent with inflammation, edema, or infiltrative neoplasia. Bright mucosal speckling has been postulated to represent dilated lacteals or focal accumulations of mucus, cellular debris, etc.. in the mucosal crypts.

- Moderate volume free abdominal fluid – This is likely secondary to hypoalbuminemia reported.

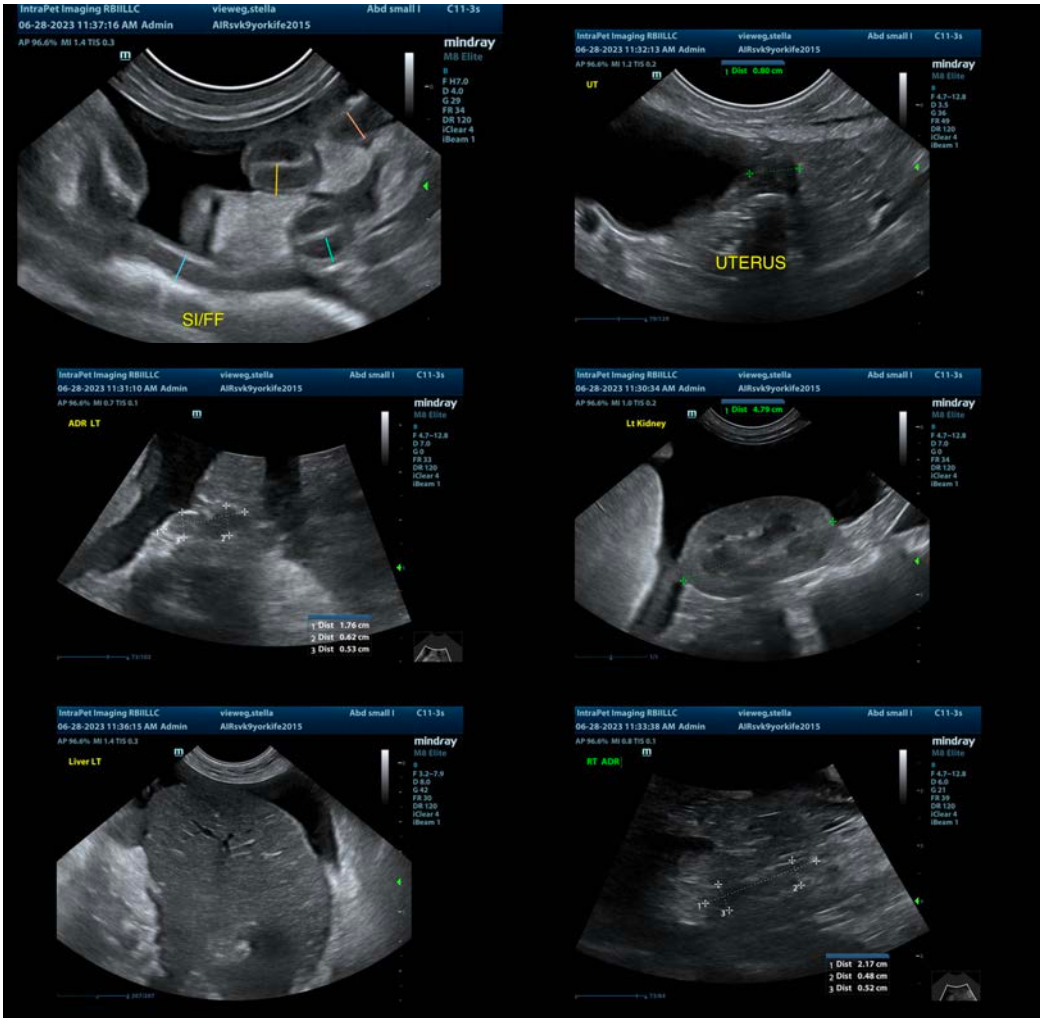
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

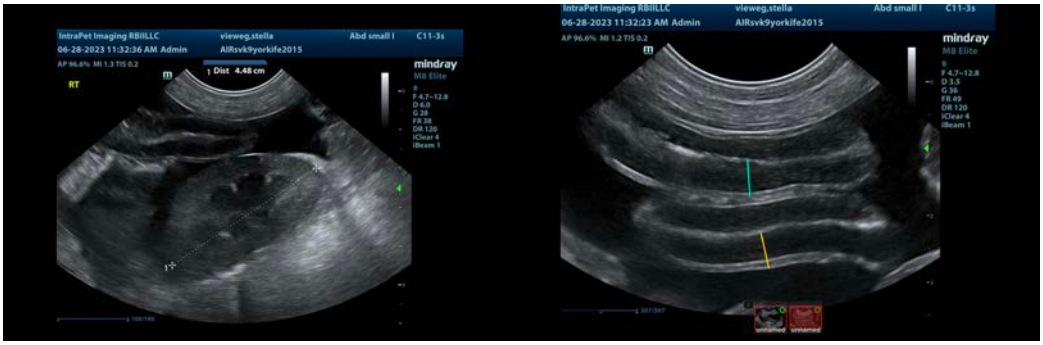
The small bowel appears thickened with some evidence of mucosal speckling and fogging. These findings are most consistent with a protein losing enteropathy, but a liver function test and urine protein to creatinine ratio should be performed to rule out the possibility of concurrent liver disease or proteinuria contributing to the hypoalbuminemia reported.

The 3 most common categories of protein losing enteropathy include severe IBD, lymphangiectasia, and GI neoplasia. Given the breed, lymphangiectasia and IBD would be most likely. These enteropathies are diagnosed based on GI biopsies. In situations of low albumin like this, I typically recommend endoscopic biopsies to reduce the risk for dehiscence and slow healing. Initial stabilization may be necessary. Consider the following:

- Recommend either an ultra low-fat diet (Royal Canin GI low-fat) or a hydrolyzed diet that is as low in fat as possible (Royal Canin hydrolyzed is a good choice).
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Recommend chronic probiotic therapy.
- Recommend 3-view thoracic radiographs looking for evidence of pleural effusion.
- If this patient is not a good candidate for anesthesia based on its clinical presentation, an anti-inflammatory dose of steroids could be considered temporarily (0.5 mg/kg per day) while trying to stabilize for additional diagnostics.

Ideally this patient should be spayed in the future to prevent unwanted litters and to prevent heat cycles, etc. from complicating therapies.





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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
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