



PATIENT

Todd Morley

SPECIES

Canine

BREED

Boston Terrier

SEX

MN

AGE

7 years

WEIGHT

12.9 kg

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP

**IMAGING
PERFORMED BY**

Crystal Hill

HOSPITAL NAME

Grand River Veterinary
Hospital

REFERRING VET

Dr. Chu/Robinson

INVOICE

13011

DATE

1/10/22

PRESENTING CLINICAL SIGNS

Chronic diarrhea, have tried some hypo diets with little success although also a picky eater. Has been on Prednisone and Metronidazole. Overweight.

Abnormal PE/Chem/CBC/UA Results: Mild hypoproteinemia, mild increased ALT, SDMA increased, Mild basophilia and mild thrombocytosis.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

No overt pathology associated with the residual prostate was evident.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 4.7 cm in length. The right kidney measured 4.9 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.64 cm width at the caudal pole and 0.52 cm width at the cranial pole. The right adrenal gland was indistinctly visualized yet was without overt pathology, subjectively measuring 0.82 cm width at the caudal pole.

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver/ Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.


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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate, variably echogenic yet nonshadowing ingesta most consistent with post prandial presentation without signs of ileus, obstruction or foreign material.

Generalized increased intestinal mucosa echogenicity with diffuse mucosa speckling to echogenic mucosal striations were present. Intestinal wall layering was maintained with mild altered 1:3 muscularis / mucosa ratio. There was no evidence of an obstructive pattern or foreign material. Segmental minor jejunal ileus was present. The duodenum wall width measured 0.49 cm. The jejunum wall width measured 0.49 cm. The appearance of the small intestine is most consistent with protein losing enteropathy or lymphangiectasia. There was no evidence of infiltrative or neoplastic intestinal disease which is considered unlikely but cannot be ruled out without full-thickness or endoscopic biopsies.

Normal visible colon wall layers were present with generalized distention containing non-formed feces, consistent with diarrhea.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

Mild peri intestinal reactive mesentery and intermittent small pockets of scant free fluid were present. No overt lymphadenopathy was noted.

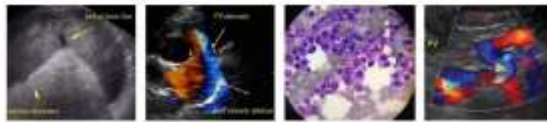
ULTRASONOGRAPHIC FINDINGS
Primary Findings

- PLE small intestine pattern with mild associated peri intestinal reactivity and scant free fluid
- Generalized mild colon distention with non-formed feces
- Gastric ingesta - suspect post prandial presentation
- Heterogeneous pancreas - nonspecific, patient variant, remodeling owing to previous inflammatory episode, or low-grade chronic to mixed pancreatitis pattern possible
- Low-grade hepatopathy - subjectively benign

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The potential for some degree of gastric stasis if documented NPO is possible. The appearance of the ingesta was most consistent with food.

The appearance of the small intestine is compatible with PLE, given the patient's chronic nonresponsive gastrointestinal signs as well as hypoproteinemia. IBD, lymphangiectasia, or nonspecific infiltrative enteropathy are possible. Ideally, endoscopic intestinal biopsies would be



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acquired for a definitive diagnosis, yet may be contraindicated if albumin levels (<2.0). Likewise, current Prednisolone therapy may be masking some degree of Intestinal mural changes.

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Urinalysis to rule out potential proteinuria is suggested. Continued empirical PLE therapy is recommended. Some or all of the following protocol may be considered.

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For an additional charge, internal medicine consult can be utilized through Sonopath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.

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One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>

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OBJECTIVE: keep albumin levels > 2 g/dl, avoid thromboembolism and cavitory effusions, monitor concurrent PLN (Wheaton Terrier PLE/PLN) and liver disease:

Plasma 10 mL / kilogram IV over 4 hours

Or **Human albumin** 2 ml/kg/h over 10 hours. Total daily volume 20.l/kg/day

And Colloids/Hetastarch

10 to 20 mL per kilogram per day and dogs

10 to 15 mL per kilogram per day cats

(Can bolus first 1/3 of dose over 15 minutes)

& maintain on LRS maintenance otherwise.

Metronidazole (10-20 mg/kg po bid)

Famotidine 1 mg/kg Iv Im po dc Sid /bid

Sucralfate 0.5-1 g po tid dogs, 0.5 g bid cats in slurry Or **Misoprostol** 1-5 ug/kg po tid

Diet: Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal Canine HP or similar.

Prednisone or prednisolone 2 mg/kg bid x 3-5 days then 2 mg/kg sid. **Chlorambucil** in refractive severe IBD/alimentary lymphoma cases (monitor cbc for rare bone marrow suppression) 4 mg/m² Q 24-48 hours.

Cobalamine (B12) 250-1500 ug/dog weekly x 6 weeks.

Calcium supplementation if necessary.

Aspirin 0.5-1 mg/kg/day or **Clopidrel** (Plavix) 1-5 mg/kg/day.

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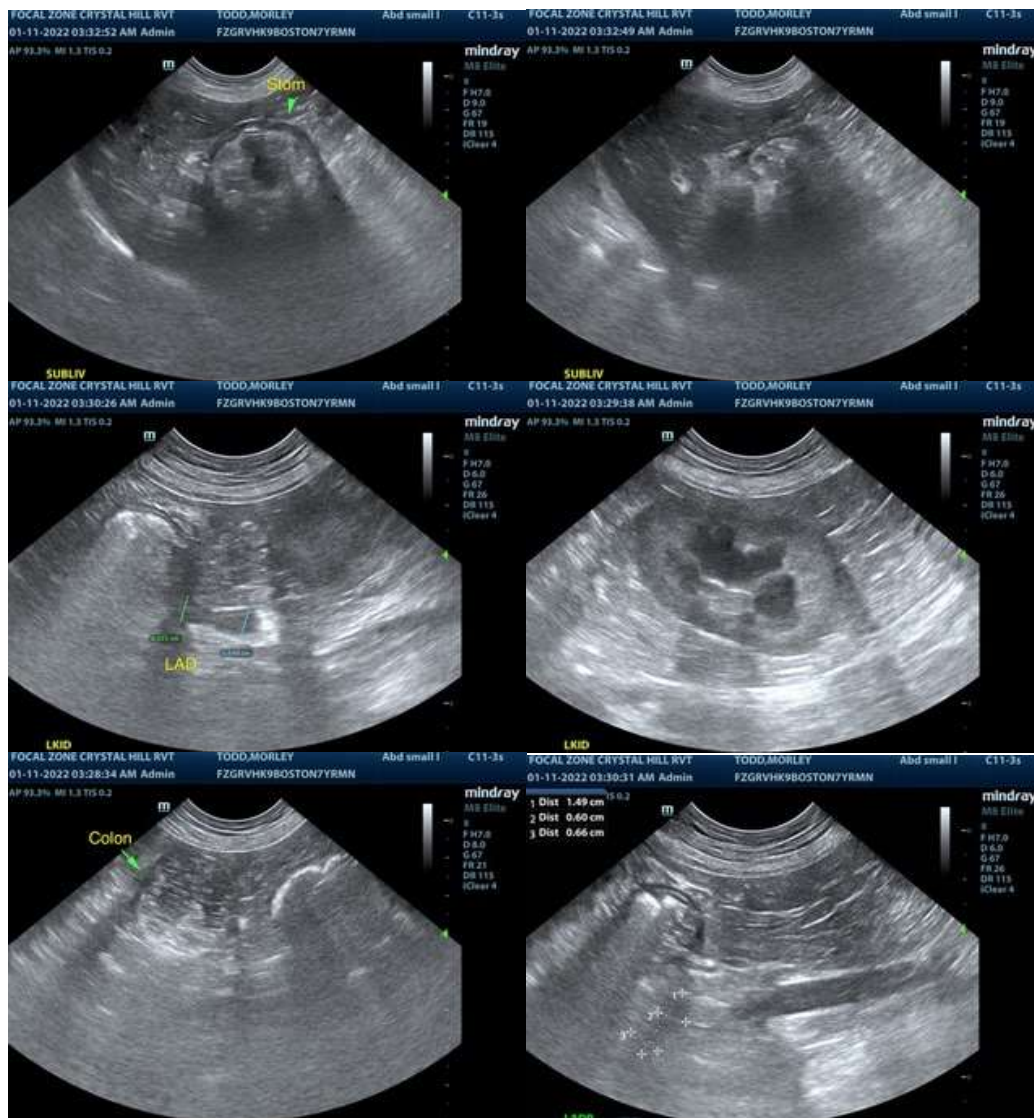
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com