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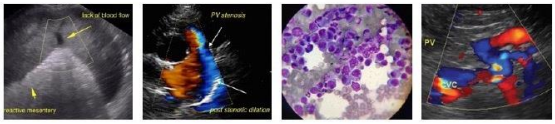


THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Brroklyn Sims

SPECIES

Canine

BREED

Yorkie

SEX

FS

AGE

4yr

WEIGHT

5.5kg

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Hillview Vet Clinic

REFERRING VET

Dr. Stevenson

INVOICE

11607ag

DATE

09/12/2022

PRESENTING CLINICAL SIGNS

Has protein losing enteropathy..suspect lymphagictaghia. Presented one week ago with diarrhea, suspected due to food change, but abdomen swollen. Xrays revealed poor definition in the abdomen - potential swelling of organs or space dwelling lesions? Dilated lymphatic vessels. Heart appeared enlarged. VHS 11.2. Started Prednisone 5 days ago. Has been started on Rayne Kangaroo low fat diet and Vit B injections.
Abnormal PE/Chem/CBC/UA Results: Please see attached rads. Low albumin and globulin- Albumin 12 (27-39) Globulin 14 (24-40) -will send lab results separately. Creatinine 31 44 - 133 µmol/L L 52 Urea (BUN) 10.1 3.2 - 11.0 mmol/L 11.1 Phosphorus 1.5 0.8 - 2.0 mmol/L Calcium b 1.4 2.2 - 2.8 mmol/L L Sodium 150 142 - 152 mmol/L Potassium 4.5 4.0 - 5.4 mmol/L Na: K Ratio 33 28 - 37 Chloride 123 108 - 119 mmol/L H Total Protein c 26 55 - 75 g/L L 65 Albumin 12 27 - 39 g/L L 31 Globulin 14 24 - 40 g/L

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 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 were noted.

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 3.5 cm in length. The right kidney measured 3.5 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.56 cm width at the caudal pole and 0.50 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.5 cm width.

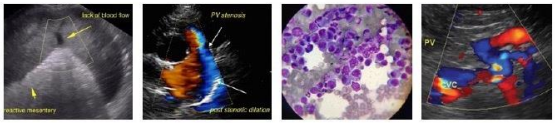
Spleen

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

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.

Gastrointestinal



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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

The small intestine presented intact yet segmental to generalized prominent wall layering with prominent mucosa. Segmental mucosal fogging was present. No evidence of loss of wall layering or masses. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

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

No overt lymphadenopathy was present. Small pocket of peri-intestinal anechoic free fluid was noted.

A small inguinal hernia consistent with fat echogenicity was present. The hernia measured ~ 2.5 cm in diameter.

ULTRASONOGRAPHIC FINDINGS

- PLE small bowel pattern
- Scant peri-intestinal free fluid
- Mild heterogeneous pancreas

Secondary:

- Small inguinal hernia

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Sonographically the appearance of the small intestine is consistent with protein losing enteropathy with considerations including IBD, lymphangiectasia or less likely infiltrative neoplasia. Intestinal biopsy would be required for definitive diagnosis yet is contraindicated given current ALB levels.

The pancreas presentation may indicate patient variant although some degree of low-grade inflammation cannot be definitively excluded. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

Potential masking of intestinal wall changes due to current prednisone therapy could be possible.

Empirically the following protocol with as needed GI support and assessment of clinical response could be considered.

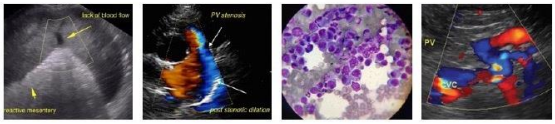
Part or all of this protocol may be considered based on your clinical impression of the patient:

OBJECTIVE: keep albumin levels > 2 g/dl, avoid thromboembolism and cavitary 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



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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

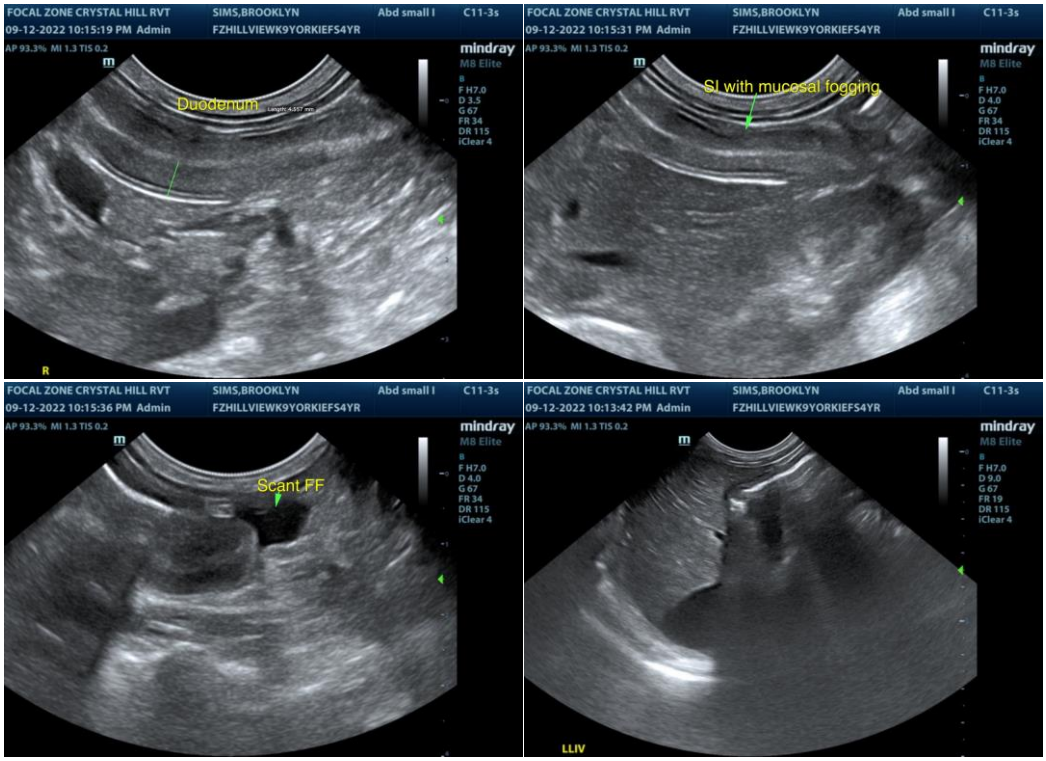
Diet: Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal Canine HP or similar.

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/m^2 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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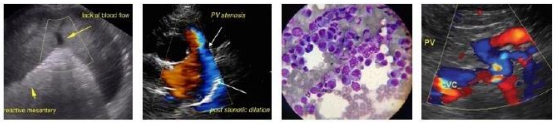

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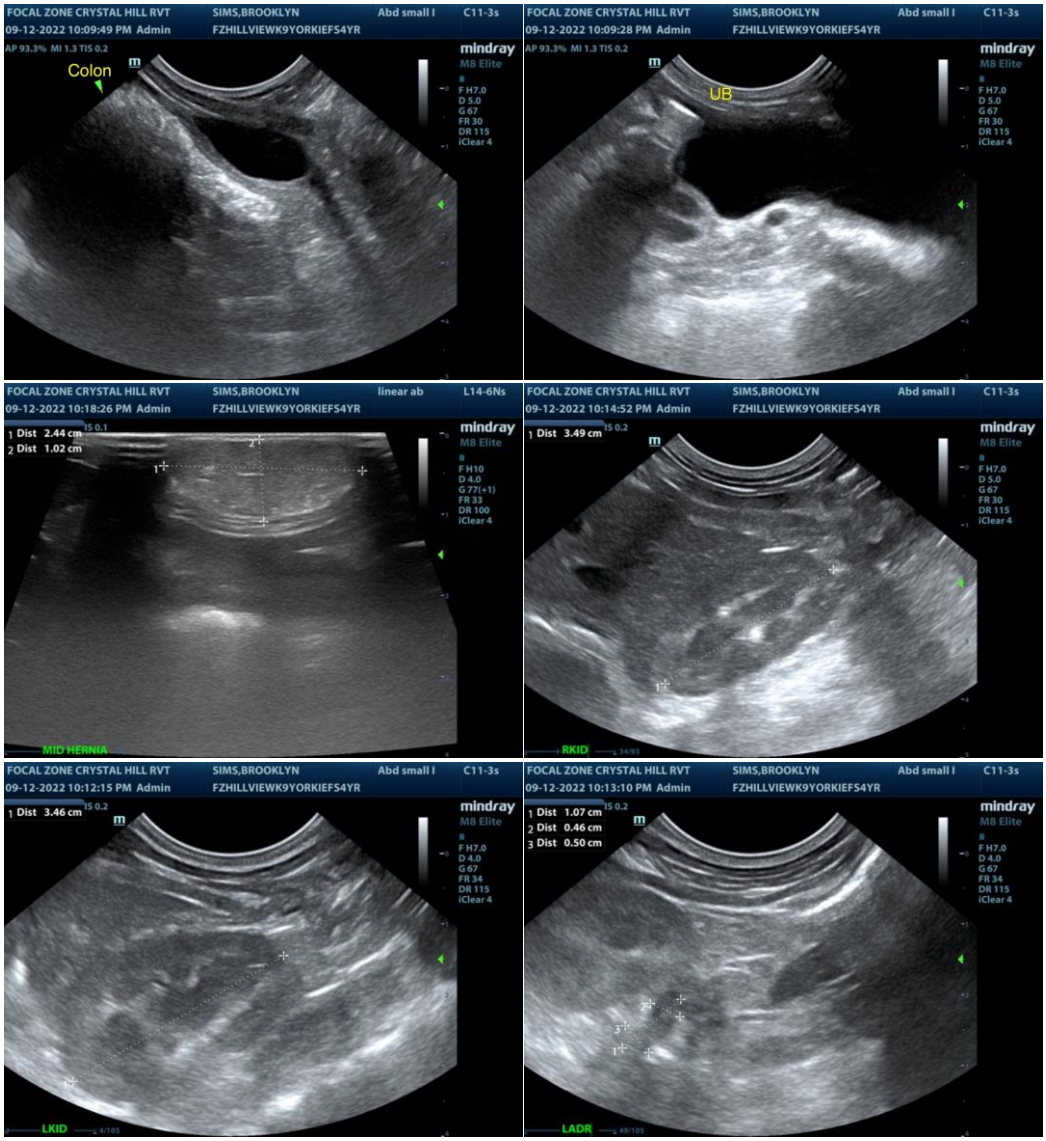

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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