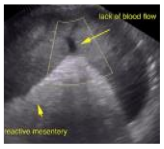
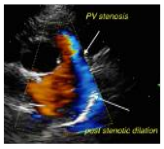
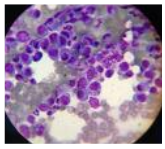
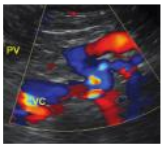
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™





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

PATIENT

Dallas Newton

SPECIES

Canine

BREED

King Charles Cavalier Spaniel

SEX

Female (likely spayed)

AGE

6/11/2011

WEIGHT

22 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Robyn Lantz

HOSPITAL NAME

Eastgate VC

REFERRING VET

Robyn Lantz

INVOICE

14461

DATE

7/28/22

PRESENTING CLINICAL SIGNS

History of intermittent GI issues, primarily diarrhea over the last year. Intermittent eye issues, dental disease and 2/6 left sided systolic murmur.
Abnormal PE/Chem/CBC/UA Results: Senior labwork wnl, except below: Still need urine and fecal sample (pending) TOTAL PROTEIN 3.2 (LOW) 5.0-7.4 g/dL ALBUMIN 1.7 (LOW) 2.7-4.4 g/dL GLOBULIN 1.5 (LOW) 1.6-3.6 g/dL Glucose 53 (LOW) 70-138 mg/dL CALCIUM 7.5 (LOW) 8.9-11.4 mg/dL CORRECTED CALCIUM 9.3 MAGNESIUM 1.3 (LOW) 1.5-2.5 mEq/L VIN: cCa [mmol/L] = 0.02 x (35 – albumin) + tCa 0.02 x (35-1.7) + 7.5 0.02 x (33.3) + 7.5 0.666 + 7.5 8.2 mmol/L WBC 16.6 x1000/UL (4.0-15.5)_ Neutrophils 12118 /UL (2060-10600) Eosinophils 1494 /UL (0-1200)

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.

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 was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.0 cm in length. The right kidney measured 5.8 cm in length.

Adrenal Glands

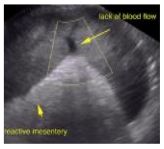
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.6 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.51 cm width at the caudal pole.

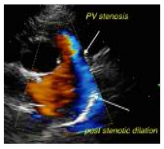
Spleen

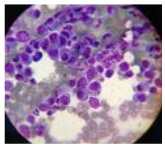
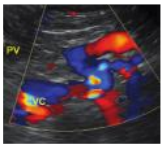
The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute 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 mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion.





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The gallbladder was non-distended in size with primarily anechoic content with minor gallbladder debris. The cystic and common bile ducts were normal.

Gastrointestinal

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 gastric body wall measured 0.33 cm width.

The small intestine presented intact yet subjective prominent wall layering owing to propensity for generalized mildly prominent mucosa. Segmental mild duodenojejunal hyperechoic mucosal speckling was present. The duodenum wall measured 0.51 cm width. The jejunum wall measured 0.40 cm width.

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 or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

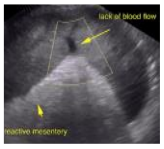
- Intact yet subjectively prominent small intestinal walls exhibiting mild segmental duodenojejunal mucosal speckling
- Mild hepatic parenchymal remodeling - benign
- Mild gallbladder debris (non-mucocele)
- Heterogeneous pancreas
- Mild age-related kidneys

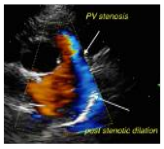
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

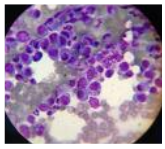
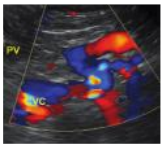
Assuming no evidence of proteinuria on urinalysis, the most likely cause of the panhyperproteinemia in this patient, given the gastrointestinal signs, is protein-losing enteropathy. IBD is suspected with additional etiologies including lymphangiectasia or less likely Intestinal neoplasia.

A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Endoscopic intestinal biopsies are required for a definitive diagnosis, yet would be contraindicated with albumin levels (<2.0). Some or all of the following protocol could be considered empirically with monitoring of albumin levels and gastrointestinal response. Urinalysis is suggested to assess for evidence of proteinuria if not done.

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





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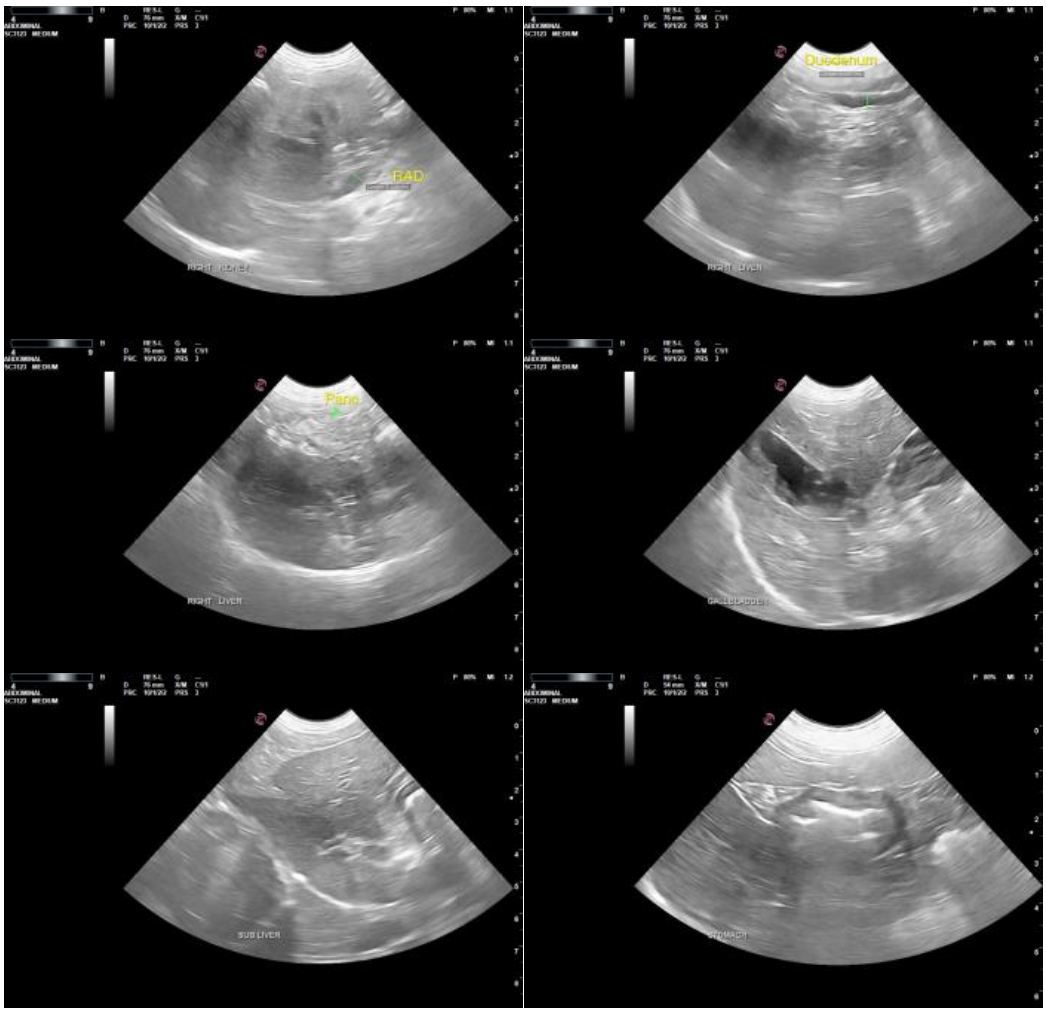
And Colloids/Hetastarch
10 to 20 mL per kilogram per day and dogs
10 to 15 mL per kilogram per day cats
(Can bolus first 1/3 of dose over 15 minutes)
& maintain on LRS maintenance otherwise.
Metronidazole (10-20 mg/kg po bid)
Famotidine 1 mg/kg Iv Im po dc Sid /bid
Sucralfate 0.5-1 g po tid dogs, 0.5 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/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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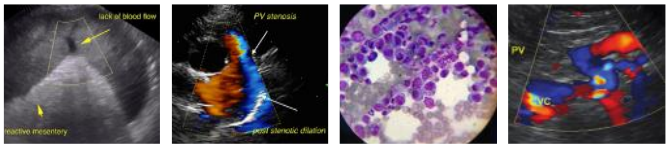

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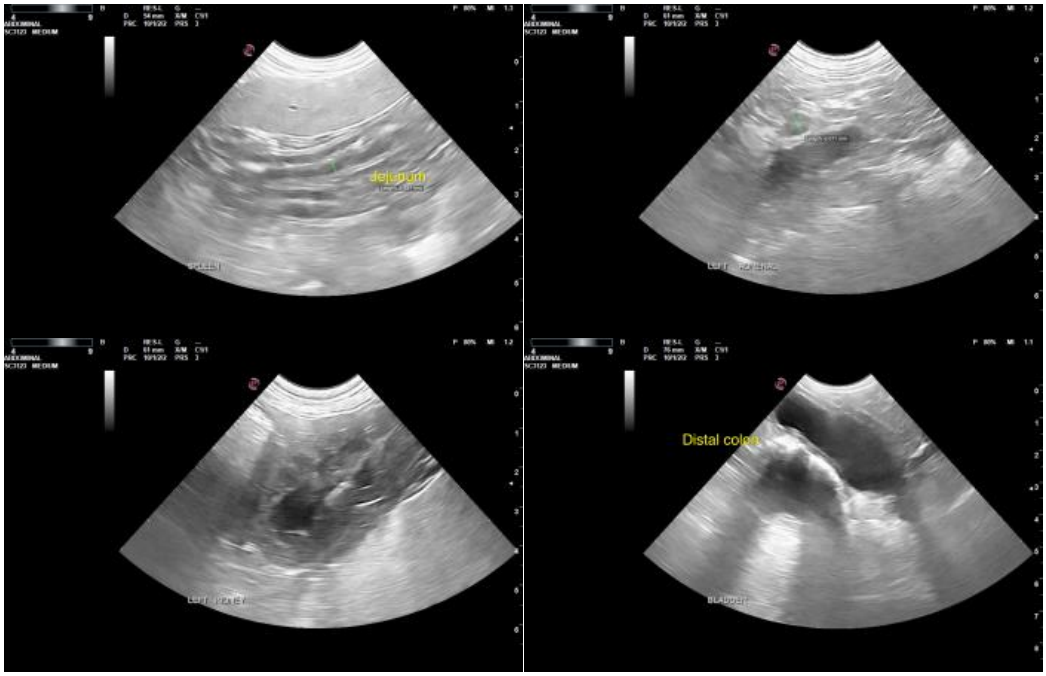

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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