



PATIENT PRESENTING CLINICAL SIGNS

Gracie Lucas History: inappetence, vomiting, diarrhea meds: metro, baytril, sulcrate

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: please see attached rads and BW. pancreatitis positive. CBC: WBC 21.4 w neutrophilia, mild thrombocytosis, Chemistry panel: Albumin 17, Globulin 24, Calcium 1.15, Lipase 2177, BUN 46.1, Creat 112, CPL abnormal

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED

Yorkie

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 were noted. Aortic trifurcation was normal.

SEX

Spayed Female

Normal size and margination was 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 to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.8 cm in length. The right kidney measured 4.0 cm in length.

AGE

12 Years

WEIGHT

5.1 kg

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.6 cm in length x 0.58 cm width at the caudal pole.

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

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 1.8 cm x 0.7 cm width at the caudal pole.

IMAGING

PERFORMED BY

Kelly Reschny

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.

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Niagra

Liver

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.

REFERRING VET

Dr. Aziz

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

INVOICE

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Gastrointestinal

The stomach exhibited thickened wall layering with intact yet indistinct wall layer detail. The stomach was primarily empty with mild retained anechoic fluid. The gastric body wall measured 0.80 cm.

DATE

6/24/22

The small intestine presented intact yet prominent to thickened wall layering, exhibiting generalized increased mucosa echogenicity to mucosal fogging. Segmental nonobstructive small intestinal ileus



PATIENT

pattern was present. The small intestinal wall measured 0.35 cm. No overt evidence of loss of intestinal wall layering or distinct intestinal masses.

Gracie Lucas

The colon exhibited generalized intact yet mildly prominent wall layering with generalized colonic distention containing non-formed to liquid feces consistent with diarrhea.

SPECIES

Pancreas

Canine

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

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Free Abdomen

Yorkie

Generalized hyperechoic mesentery with mild volume peritoneal free fluid was present. No overt evidence of significant lymphadenopathy.

SEX

Spayed Female

ULTRASONOGRAPHIC FINDINGS

Primary Findings

AGE

12 Years

- Diffusely thickened stomach
- Diffuse prominent to thickened intestine, exhibiting increased mucosa echogenicity/mucosal fogging- consistent with PLE pattern
- Diffusely distended colon, containing non-formed feces
- Generalized hyperechoic mesentery and mild volume peritoneal free fluid

WEIGHT

5.1 kg

INTERPRETED BY

Secondary Findings

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

- Mild chronic renal changes
- Minor hepatic parenchymal remodeling

IMAGING PERFORMED BY

Kelly Reschny

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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The overall appearance of the small intestine, given the hypoalbuminemia and gastrointestinal signs were consistent with protein losing enteropathy. Considerations may include chronic IBD, lymphangiectasia, while the possibility of infiltrative intestinal/gastrointestinal disease, such as neoplasia, cannot be excluded. Intestinal biopsies are required for a definitive diagnosis yet contraindicated with albumin levels <20. Potential for some degree of low-grade to chronic pancreatitis as a contributing factor to the gastrointestinal signs, could be present and sonographically normal, yet no obvious evidence of significant pancreatic pathology.

REFERRING VET

Dr. Aziz

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered to rule out proteinuria as a contributing factor to the hypoalbuminemia. Empirically, some or all of the following protocol is recommended.

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PLE Therapy

DATE

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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 cavitory effusions,



PATIENT

monitor concurrent PLN (Wheaton Terrier PLE/PLN) and liver disease:

Gracie Lucas

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

SPECIES

Canine

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.

BREED

Yorkie

Metronidazole (10-20 mg/kg po bid)
Famotidine 1 mg/kg lv 1m 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

SEX

Spayed Female

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.

AGE

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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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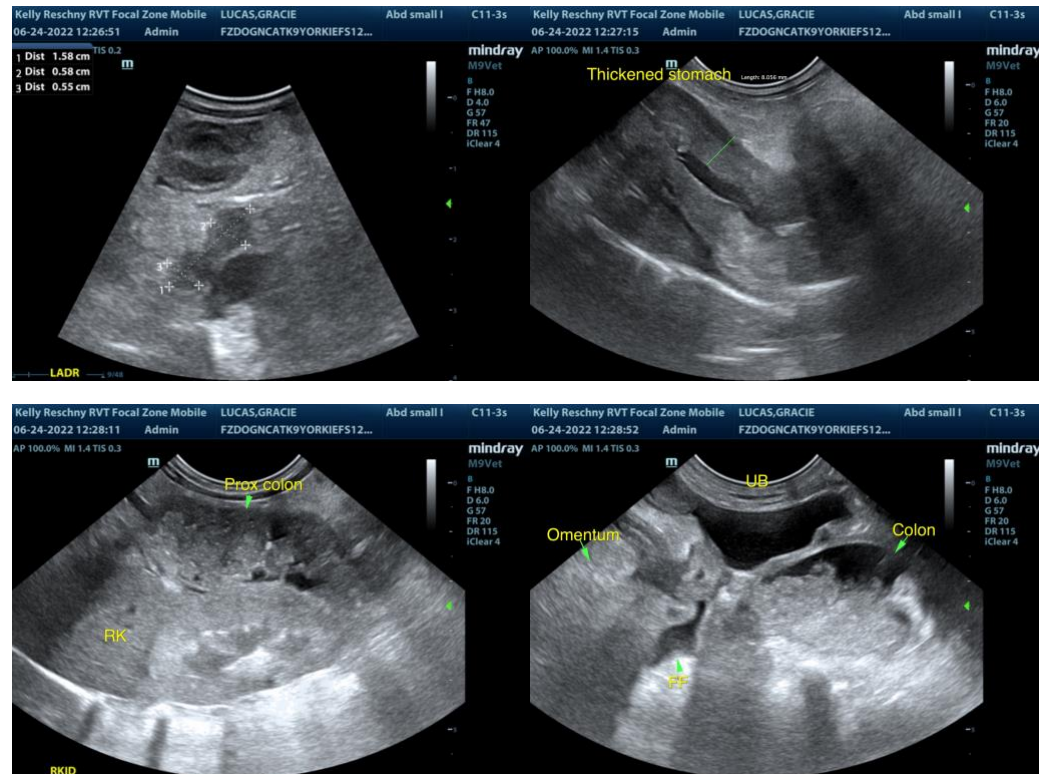
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PATIENT

Gracie Lucas

SPECIES

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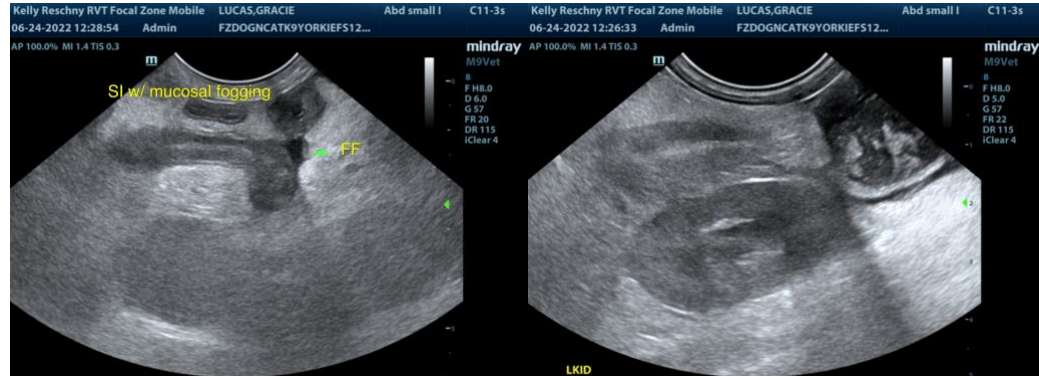
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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