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Clinical Sonography & Telecytology
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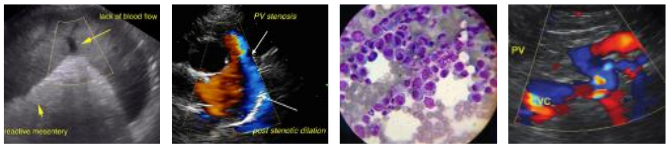


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Leoben Carl

SPECIES
Canine

BREED
Poodle

SEX
Neutered Male

AGE
10 Years

WEIGHT
37.8 kg

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

IMAGING PERFORMED BY
Alejandro Vargas Lumbreras

HOSPITAL NAME
Central Island VEH

REFERRING VET
Dr. Emma Derocher

INVOICE
14464

DATE
3/24/22

PRESENTING CLINICAL SIGNS

History: Hx of diagnosis of DCM by rDVM in Summer 2021 - pimobendan, taurine administration. Initial presentation on March 19/2022 for sporadic vomiting over the course of several weeks. Bloodwork and urinalysis at rDVM reportedly unremarkable. Inappetence. Patient hospitalized for 24 hour period for diagnostic workup and monitoring. Vomiting resolved during time in hospital. Returned for further workup today by abdominal ultrasound.
Abnormal PE/Chem/CBC/UA Results: Bloodwork and urinalysis at rDVM prior to March 19 reportedly unremarkable. Moderate pain on cranial abdominal palpation on March 19 Abdominal radiographs (March 19) w/ radiologist interpretation - non-specific findings, no obvious mass, could not rule out chronic/intermittent foreign body, no obstructive pattern Bloodwork on March 19 unremarkable - mild ALT elevation. Normal cPL. Normal baseline cortisol. NSF on physical examination today other than suspect Gr I/VI heart murmur.

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 were noted. Aortic trifurcation was normal.

No overt pathology in the area of the residual prostate.

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 7.2 cm in length. The right kidney measured 7.0 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 0.62 cm width at the caudal pole and 0.54 cm width at the cranial pole.

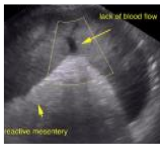
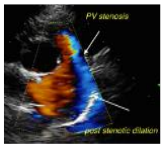
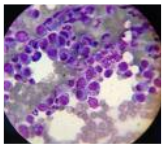
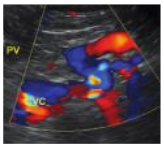
No overt pathology in the area of the right adrenal gland.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

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.

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

Gastrointestinal

The gastric wall in the region of the subjective dorsal gastric body, potentially extending into the cranial and caudal gastric body, exhibited mild asymmetrical thickening, exhibiting primarily homogeneous mural echogenicity yet loss of discernable wall layering, measuring up to 1.8-1.9 cm wall width. The pyloric outflow tract appears to be patent without evidence of retained ingesta, fluid or foreign material with only mild luminal gas present in the stomach.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. 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 evidence of omental masses, lymphadenopathy or effusion was present. The perigastric omentum appeared to be overtly normal.

ULTRASONOGRAPHIC FINDINGS

- Regional to variably thickened stomach, exhibiting subjective loss of discernable wall layering
- Overtly normal small bowel
- Mild chronic renal changes
- Mild heterogenous. pancreas

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the patients vomiting and inappetence is most likely associated with the stomach without evidence of concurrent small bowel pathology. Although not definitive, this is most concerning for infiltrative neoplasia (i.e., lymphoma, adenocarcinoma), although significant inflammatory process or benign hypertrophy cannot be definitively excluded.

Potential for low-grade pancreatic inflammation could also be present and present sonographically normal. Further assessment with spec CPL could be considered.

Three-view chest radiographs suggested to rule out evidence of thoracic or esophageal pathology. Upper gastrointestinal endoscopy or potential surgical biopsies of the stomach are required for further clarification. If biopsies are not elected, some or all of the following protocol could be considered with as needed gastrointestinal support.

Helicobacter/Gastritis protocol

A clinical trial of **Zithromax (*Dogs:*** 5-10 mg/kg p.o. q24h. May increase dosing interval to q48h after 3-5 days of treatment)**, Metronidazole** (10-20 mg/kg p.o. b.i.d.), **Pepcid** (0.5-1 mg/kg s.i.d.) and

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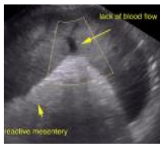
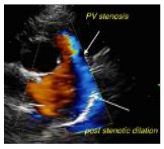
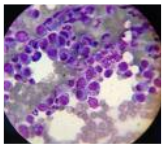
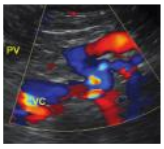

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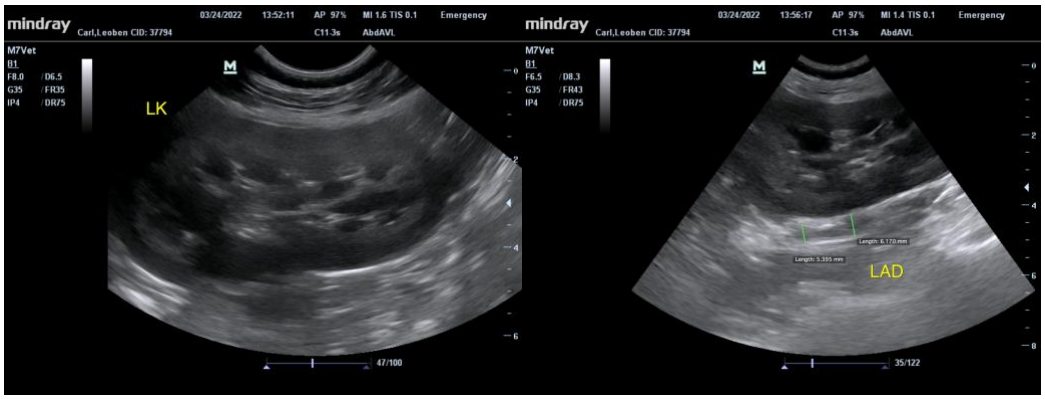
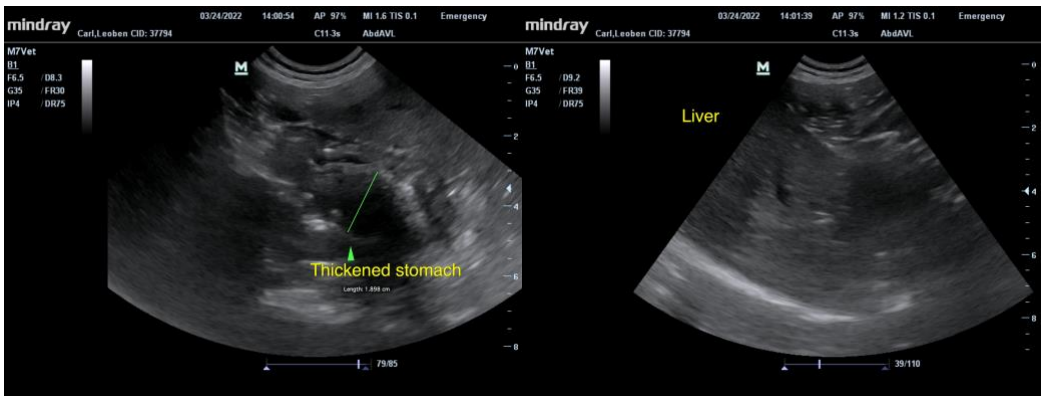
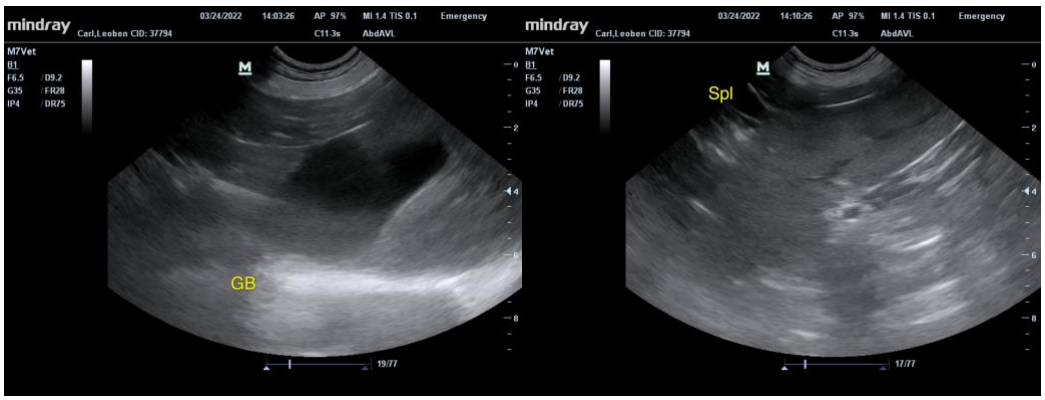
Sucralfate (0.5-2 g/dog PO) or **Omeprazole** (1 mg/kg p.o. s.i.d.) over the next 3 weeks along with a **novel-protein or hydrolyzed diet** with slurry feeding b.i.d./t.i.d. over the next 2-4 days and then increase to canned diet bid. Dry food should be avoided over the next 4 weeks. A recheck sonogram to assess GI improvement or progression would be ideal in 4 weeks.







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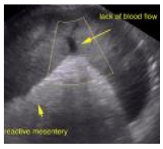
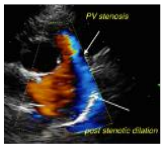
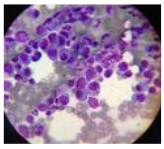
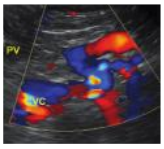

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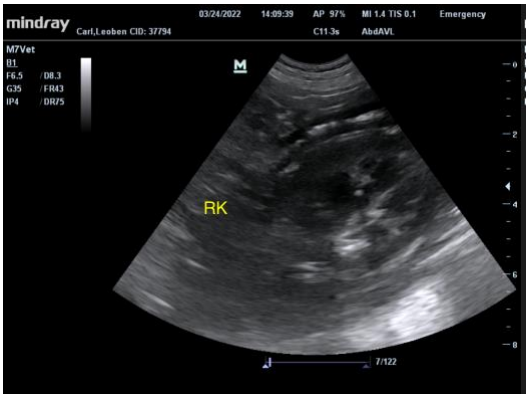

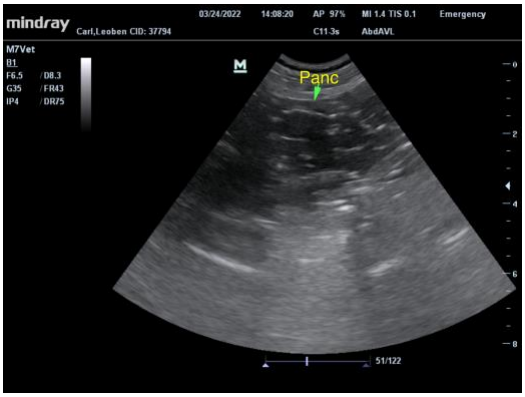

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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