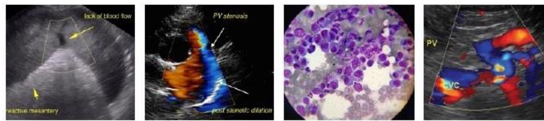

PATIENT

Oscar Charlton

SPECIES

Canine

BREED

Maltese

SEX

MN

AGE

3.5yr

WEIGHT

8.8kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Hamilton Region Emergency Clinic

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PRESENTING CLINICAL SIGNS

Since ~June 20th, hyporexia, lethargy, 1 episode of vomiting. No response to supportive care attempted by regular veterinarian (maropitant, Fortiflora, SQ fluids). Relatively unremarkable CBC/biochem at regular veterinarian on June 21st (*WBC 18.2 (ref: 4-15.5), neutrophils 12.74 (ref: 2.06-10.6), thrombocytosis) + negative fecal + normal specCPL + 2+ protein and 11-20 struvite crystals on urinalysis but normal UPCR added on + negative Accuplex (heartworm/tick test). At presentation on June 25th, vital signs normal, morbidly obese, mild cranial abdominal pain, otherwise unremarkable PE. Blood gas + CPL normal. Radiographs sent to IDEXX - interpretation included below. On IVF, Maropitant, Methadone, Gabapentin and Mirtazipine.

Abnormal PE/Chem/CBC/UA Results: IDEXX VetMedStat 3-view abdominal radiographs INTERPRETATION: No abnormalities are noted in what is included of the thorax. The liver, spleen, kidneys and urinary bladder are normal within limits of overlying GI tract. The stomach is minimally distended with gas and scant heterogenous fluid. Gas to mobilize is normally into the pyloric antrum and proximal duodenum in the left lateral view. Other small intestines are small in diameter and unremarkable in content. The colon is mildly distended with gas and heterogenous fluid. There is corrugation of the distal descending colon in the ventrodorsal projection only. Normal detail no relevant skeletal concerns are seen. The patient is noted to be obese, with a large subcutaneous fat deposit along the dorsum. CONCLUSIONS: A definitive source of the patient's clinical signs is not seen. There is a small possibility that the material in the gastric lumen represents indigestible foreign material rather than frothy fluid, but the overall degree of concern is low. RECOMMENDATIONS: Consider complete diagnostic abdominal ultrasound to assess for origins of clinical signs that may not be reliably detected on survey radiographs and biochemical assessments (e.g. some manifestations of pancreatitis). Consider screening radiographs of the neck and thorax to verify that there are no indicators of esophageal pathology. Vomiting and regurgitation are not as clearly differentiated in the clinical setting as suggested in the literature. Non-imaging assessment (e.g., sedated oropharyngeal examination and/or endoscopy) to assess for mucosal changes in the esophagus and stomach also considered.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 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.

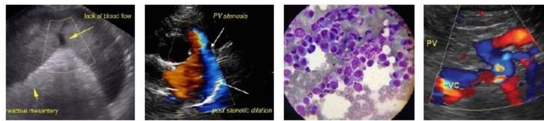
Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 3.7 cm in length. The right kidney measured 4.1 cm in length.

The area of the aortic trifurcation was free of pathology.

The area of the residual prostate appeared normal and 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 0.50 cm width at the caudal pole and 1.2 cm length. The right adrenal



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gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.41 cm width at the caudal pole and 1.1 cm length.

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 with mild non-organized debris. No evidence of gallbladder or peripheral gallbladder inflammation was present. 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 contained minor retained echogenic fluid with no signs of ileus, obstruction or gastric distension with retained ingesta or foreign material.

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 parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

Free Abdomen

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Unremarkable GI tract with minor retained gastric fluid.
- Sonographically unremarkable pancreas.
- Minor gallbladder sediment (non-mucocele)-likely incidental assuming no evidence of cholestasis, potentially secondary to anorexia/fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, there is no overt evidence of significant abdominal visceral specifically GI or pancreatic pathology as a definitive cause of the patient's clinical signs. No evidence of GI foreign material or obstruction. No overt indication for immediate surgical intervention. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

Although considered unlikely considering normal adrenal presentation, a resting cortisol level to rule

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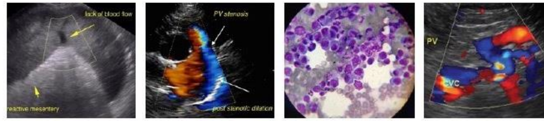

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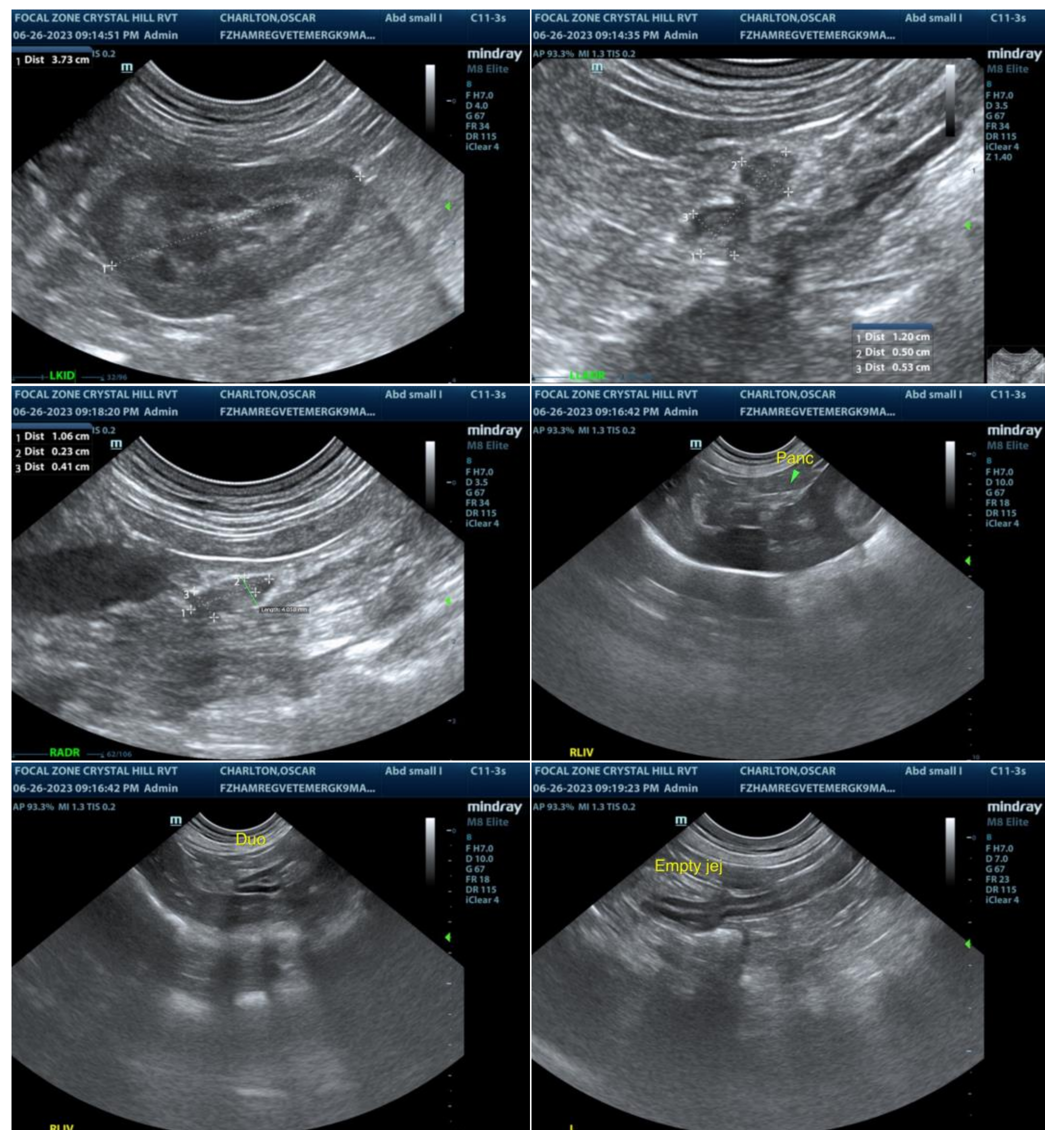
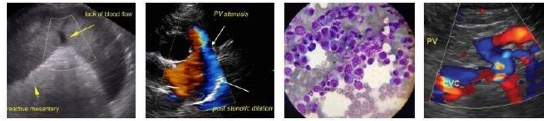
out occult Addison's disease is recommended. Three view chest radiographs are recommended if not done to assess for occult thoracic/esophageal pathology. Empirically as needed GI support including gastric protectant protocol i.e., Omeprazole 1 mg/kg PO SID over the next 3 weeks along with canned novel protein or hydrolyzed diet trial. Broad spectrum deworming is suggested even with negative fecal testing.

Pending additional diagnostics or if continued progressive GI signs/weight loss, sonographic reassessment and/or endoscopy for potential biopsies and assessment of non-structural intestinal disease may be indicated.





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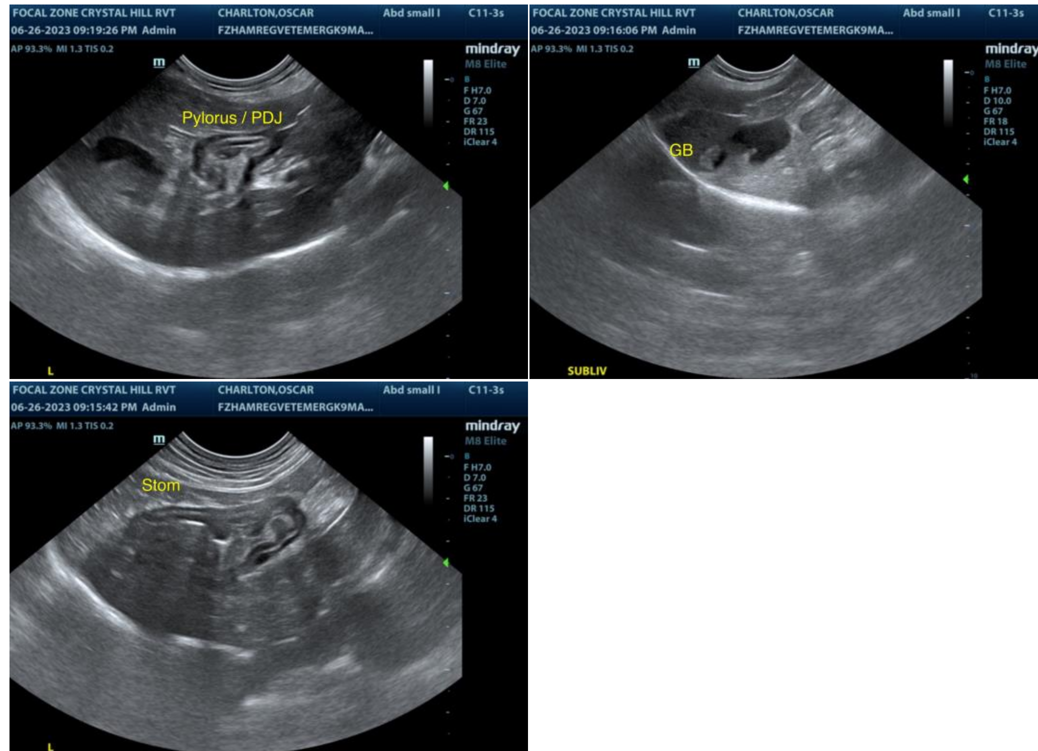

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

info@SonoPath.com