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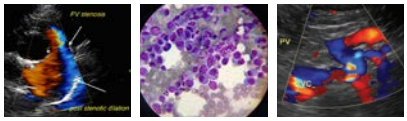

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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**DATE**

11/9/22

**PATIENT**

Oz Briskin-Rodriguez

**SPECIES**

Canine

**BREED**

Chow X

**SEX**

Neutered Male

**AGE**

5/17/10

**WEIGHT**

50.8 Pounds

**INTERPRETED BY**

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

**IMAGING PERFORMED BY**

Andi Parkinson RDMS

**HOSPITAL NAME**

Frederick Road VH

**REFERRING VET**

Dr. Flynn

**INVOICE**

42666

## PRESENTING CLINICAL SIGNS

Over the summer, Oz had some diarrhea which did respond to medication. He was losing weight and had a poor appetite. Bloodwork showed a lymphocytosis, nucleated RBCs, and an elevated ALT. He also showed a jump in renal values although they were still within normal limits at the time. AUS was recommended but the owner did not schedule. On exam 11/7, Oz had had multiple episodes that morning of vomiting blood-tinged bile. He had eaten breakfast afterwards and kept it down and there was no report of diarrhea. On exam, he was euhydrated and tense in the abdomen without specific splinting. Otherwise exam was unremarkable. He was been started on famotidine and sucralfate pending repeat lab results, response to therapy, and
results of ultrasound.

Current Medications: famotidine 10 mg 1 tab PO q 12 hr, sucralfate 1 gram 1 tab Po q 8-12 hr
Lab Results: August: ALT 151, lymph 6554, CREA 1.3, SDMA 14; current labs pending.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, and ureteral papillae appear normal with no evidence of wall thickening, mucosal irregularities, or masses. There is a very small hyperechoic foci in the dependent portion of the urinary bladder, most consistent with a small stone measuring 0.25 cm. Additionally, the urethra appears slightly dilated at 0.76 cm. No obvious obstruction observed.

The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (5.4 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.39 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

The left adrenal gland is normal in size measuring 0.60 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.63 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

### *Spleen*

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

### *Liver*
The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

### *Gastrointestinal*
The stomach is dilated with a large amount of fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.40 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### *Pancreas*
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### *Free Abdomen*
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

## ULTRASONOGRAPHIC FINDINGS

- Small hyperechoic foci in the dependent portion of the urinary bladder – Findings are most consistent with a very small stone – Recommend urinalysis and culture.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- Large ingesta visualized within the gastric lumen – Correlate with the feeding history. If the patient was adequately fasted, consider such differentials as delayed gastric emptying or a partial pyloric outflow obstruction (none observed).

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a very small mineralization in the dependent portion of the urinary bladder. This may be small enough to pass. Correlate with abdominal radiographs, a urinalysis and culture, with continued monitoring.

An obvious lesion responsible for the current episode of vomiting is not observed. Unfortunately, there are many causes for vomiting that cannot be diagnosed by ultrasound alone.

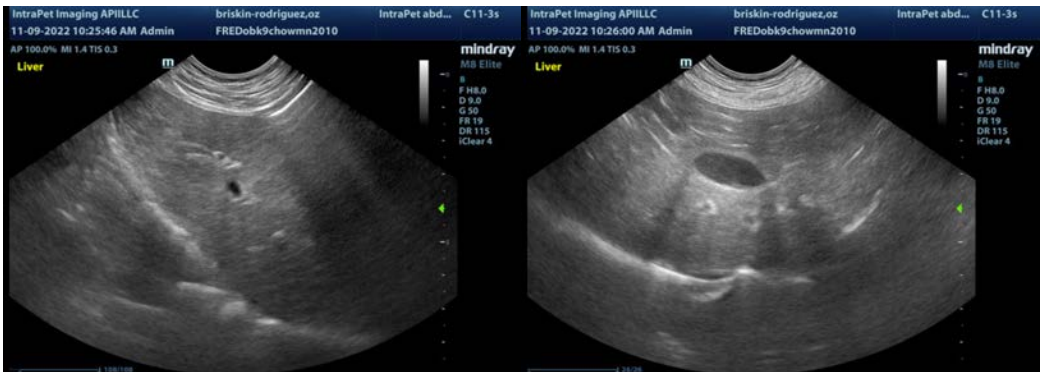
Consider such differentials as food allergy/dietary intolerance, GI parasitism, acute pancreatitis, dietary indiscretion, non-specific gastroenteritis, ingested foreign material, IBD and less likely neoplasia, etc.…

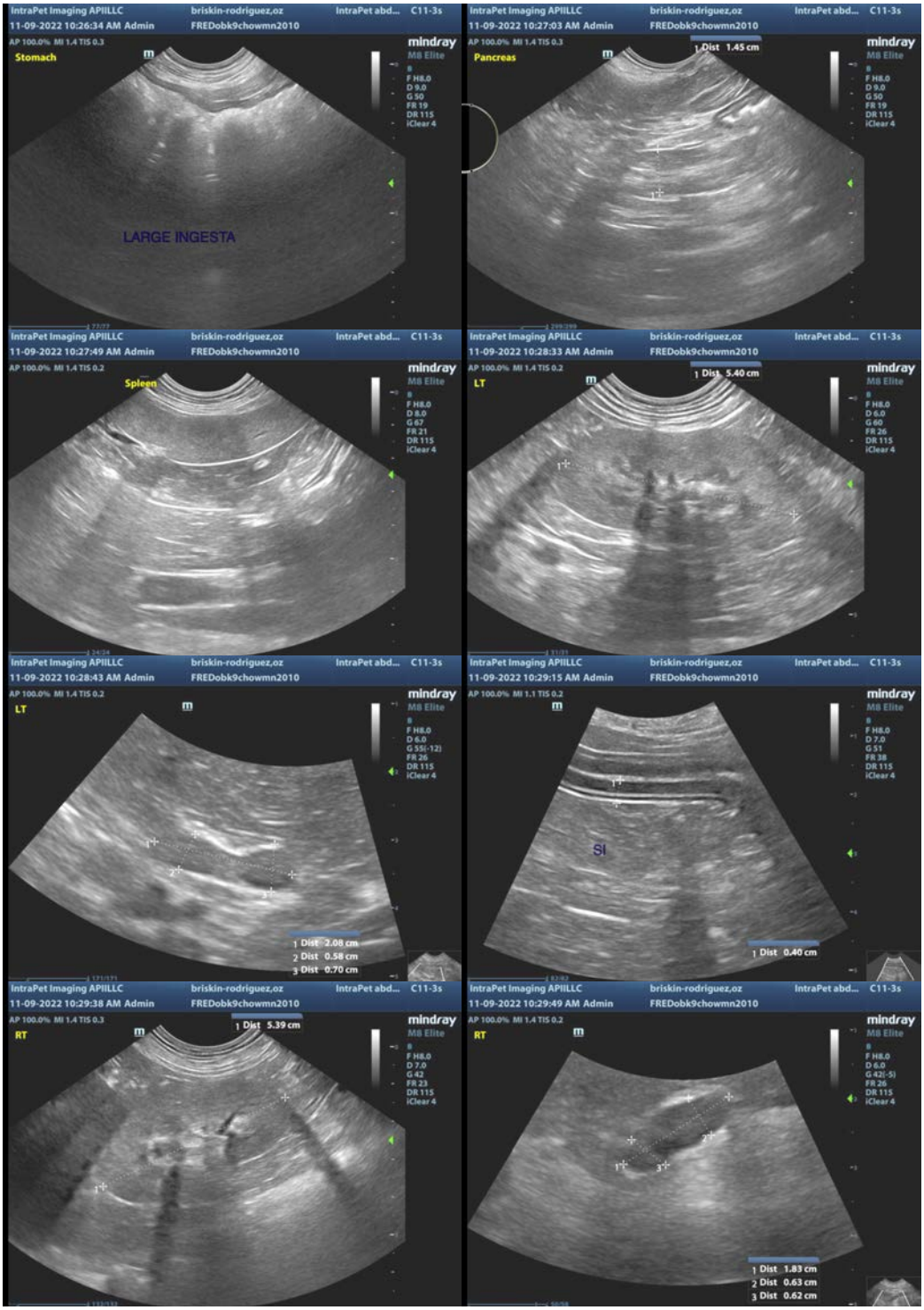
- Recommend symptomatic treatment for acute gastroenteritis.
- If symptoms persist, consider a GI panel to Texas A&M for a TLI, PLI, cobalamin and folate, serial abdominal radiographs, and possibly GI biopsies.

The changes observed in the liver are non-specific. No focal lesions are observed. Given the mild/moderate liver enzyme elevations, consider the following:

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with Cushing's are present, consider adrenal function testing (ACTH stim)
- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)
- If no response to supportive care (Denamarin, fluids, antibiotics, +/- ursodiol etc.) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

The stomach is distended with a large amount of ingesta. Correlate with feeding history. If the patient was adequately fasted, consider the possibility of delayed gastric emptying. No evidence of a pyloric outflow tract obstruction was observed, but if this persists, further evaluation should be considered.

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2 Dist 0.58 cm
3 Dist 0.70 cm
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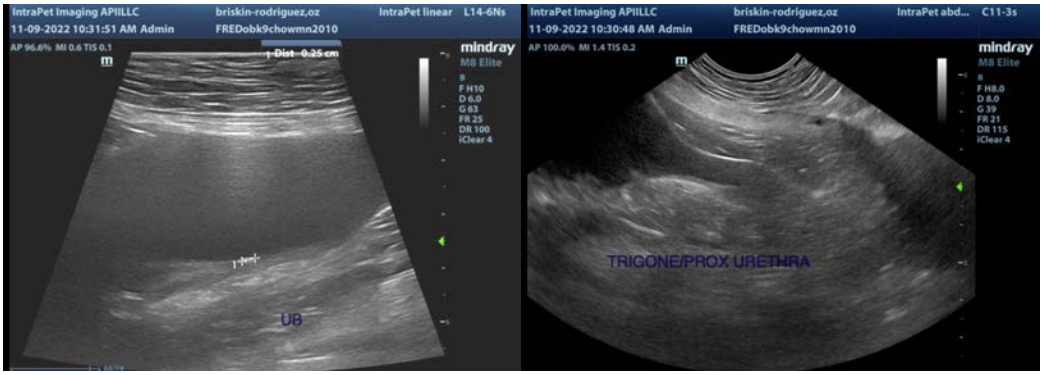
2 Dist 0.63 cm
3 Dist 0.62 cm




**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.

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