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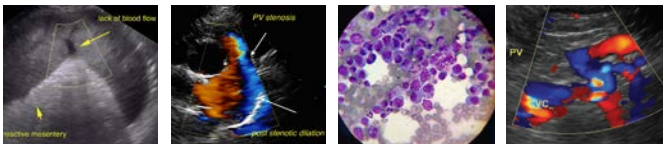

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Lexi Gilray

SPECIES

Canine

BREED

Pomeranian X

SEX

Spayed Female

AGE

13 Years

WEIGHT

7.6 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Donna Markland

HOSPITAL NAME

Island Mobile Paws

REFERRING VET

Dr. Donna Markland

INVOICE

33356

DATE

12/8/21

PRESENTING CLINICAL SIGNS

Presented to regular veterinary hospital on November 4 with a 48-hr history of diarrhea preceded by one episode of vomiting. The physical exam was unremarkable. Lexi was diagnosed with likely dietary indiscretion and sent home on metronidazole, omeprazole, and a rice and lean protein diet. There were a few more episodes of vomiting and inappetence over the next two weeks. On November 16, the client took Lexi to the emergency hospital after two episodes of vomiting in spite of pepcid a/c and omeprazole. Cerenia was given, and Lexi improved. She is no longer vomiting or having diarrhea. Her appetite and energy are normal. Lexi has a history of infrequent seizures. She was on Keppra, but this was discontinued about two years ago. Since then, she has had approximately three seizures. One of those was after a dental procedure this July, and another was a few nights ago after she was spinning in circles in the yard. Years ago, Lexihad elevated hepatic enzymes and was diagnosed with liver failure. She was put on milk thistle and seemed to recover. Lexi is not on any medications currently. The most recent labwork is from July, just before her dental procedure.
Abnormal PE/Chem/CBC/UA Results: 7/23/21 CBC/Chem= wnl 2/12/21 BUN=11.4 (2.7-9.8) Alb=40.8 (30-40) ALP=128 (21-122)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

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 (3.99 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (4.43 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 0.41 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 0.41 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.

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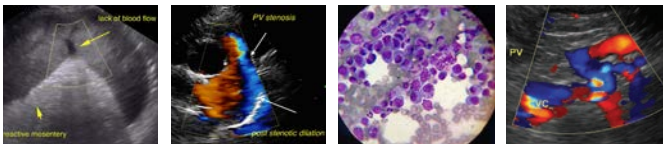

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Liver

The liver is large in size, and normal in 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. There are numerous ill-defined hypoechoic nodules visualized within the liver, measuring from 0.2-1.0 cm. Two were visualized at 0.5 and 0.85 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is moderately dilated with 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 measured 0.27 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

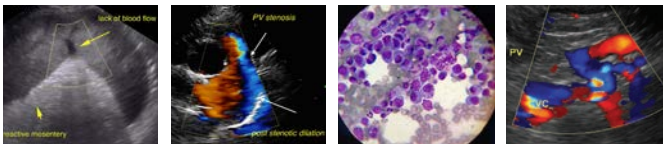
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

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

- Large, heterogeneous liver with ill-defined, hypoechoic nodules – 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. The appearance of the nodules favors a benign process.
- Moderate ingesta within the gastric lumen – Correlate these findings with feeding history. If adequately fasted, differentials include delayed gastric emptying or partial gastric obstruction (none observed).
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is



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unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

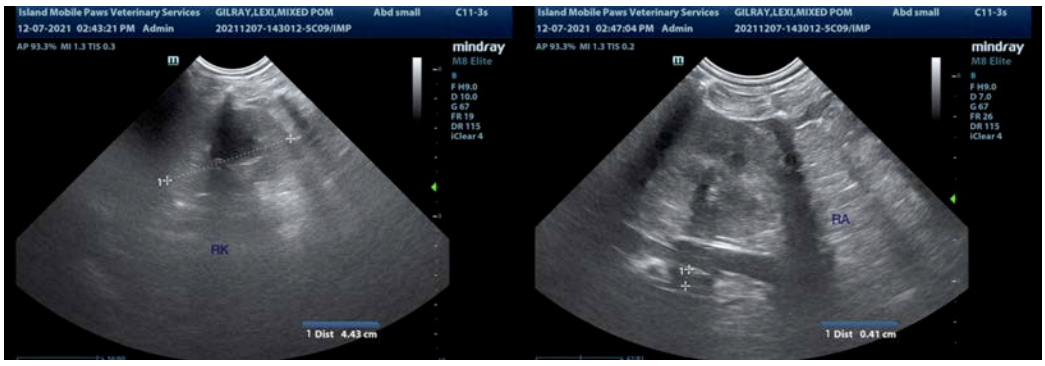
No lesions were observed within the GI tract to explain the vomiting reported. The liver is large and somewhat mottled with ill-defined, hypoechoic nodules. This appearance favors a benign process, but underlying neoplasia cannot be ruled out. Unfortunately, there are many causes for vomiting that cannot be definitively diagnosed by ultrasound alone.

- Consider metabolic causes based on blood work, liver function testing, and a GI panel to Texas A&M with quantitative PLI, TLI, cobalamin and folate to further evaluate the pancreas and small intestine.
- Consider primary GI causes such as GI parasitism, dietary indiscretion, mild pancreatitis, bacterial dysbiosis, food allergy, IBD, and less likely intestinal neoplasia.

In older patients with more chronic symptoms, I would most strongly consider food allergy, IBD, and intestinal neoplasia.

- Recommend a diet trial with a novel protein/hydrolyzed protein prescription diet.
- Recommend GI panel as recommended above.
- Recommend a liver function test +/- a fine needle aspirate of the liver.
- If symptoms are progressing, consider obtaining GI biopsies +/- liver biopsies.

Recommend 3-view thoracic radiographs to evaluate for concurrent intrathoracic disease.



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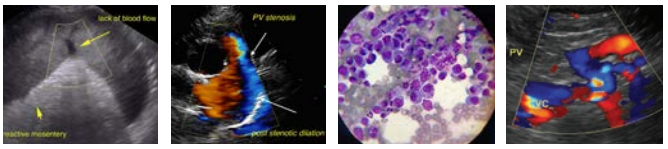

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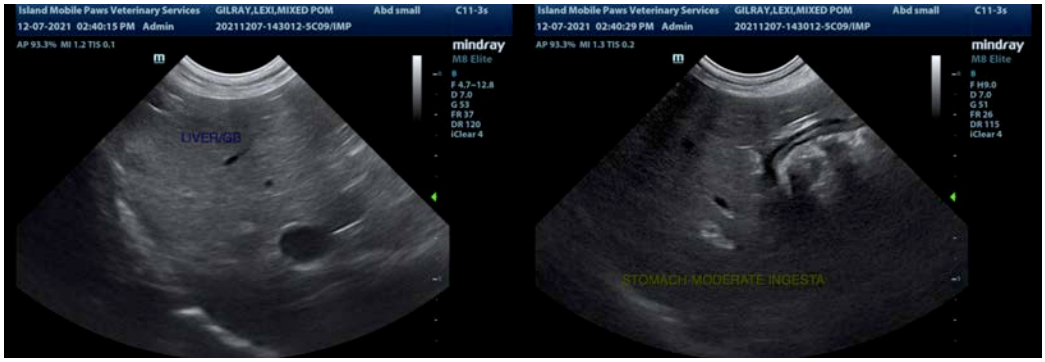

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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kathleen.sennello@sonopath.com