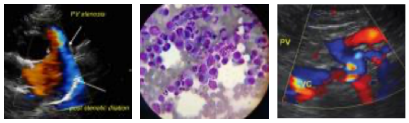
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
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DATE

7.21.2023

PATIENT

Lucy Foss

SPECIES

Canine

BREED

Labrador

SEX

Spayed Female

AGE

5/10/2010

WEIGHT

64 lbs

INTERPRETED BY

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

HOSPITAL NAME

Timonium AH

REFERRING VET

Dr. Montessi

INVOICE

13786

PRESENTING CLINICAL SIGNS

2-3 wks ago intermittent vomiting/GI signs and mild decrease in appetite. Recent boarding - started vomiting and decreased appetite. 7/18- radiographs taken- ingesta in stomach. gas filled intestines. Started Cerenia, pantoprazole and gave IVF bolus. O started bland diet and pet had multiple episodes of vomiting today (while on Cerenia). Still eating grass and increased GI sounds. h/o Osteoarthritis

Current Medications: Deramaxx, Gabapentin for OA, Proin for urinary incontinence
Cerenia/Prilosec for vomiting/GI disease
Lab Results: mild anemia Hct: 33.9%, mild neutrophilia, otherwise wnl.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, BS, RDMS.

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 2 cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (7.23 cm). Overall echogenicity is normal with adequate 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 (7.01 cm). Overall echogenicity is normal with adequate 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 (0.70 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 (0.77 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 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 throughout the parenchyma (an example of which measures 1.69 cm).

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. The duodenum measured as normal (between 0.3-0.5 cm in wall thickness) and the jejunum measured as normal (0.35 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 area of 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

Findings

- Large heterogenous 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 nodules observed trend toward a more benign process, but underlying neoplasia cannot be ruled out.

- Moderate ingesta/gas visualized within the gastric lumen – Findings are consistent with a non-fasted patient.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal lesions are visualized associated with the gastrointestinal tract to explain the intermittent GI symptoms described. Despite the significant pancreatic enzymes elevations on lab-work, there is minimal evidence of inflammation on today's scan. Unfortunately, the ultrasonographic appearance of the pancreas does not always correlate with clinical signs or lab-work. If pancreatic inflammation is strongly suspected, consider empirical treatment, but severe pancreatic disease seems unlikely.

Unfortunately, there are many causes for chronic vomiting and diarrhea which cannot be diagnosed by ultrasound alone.

Consider such differentials as food allergy/dietary intolerance, GI parasitism, pancreatitis, dysbiosis, recurrent dietary indiscretion, IBD and less likely neoplasia, etc.

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Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks).

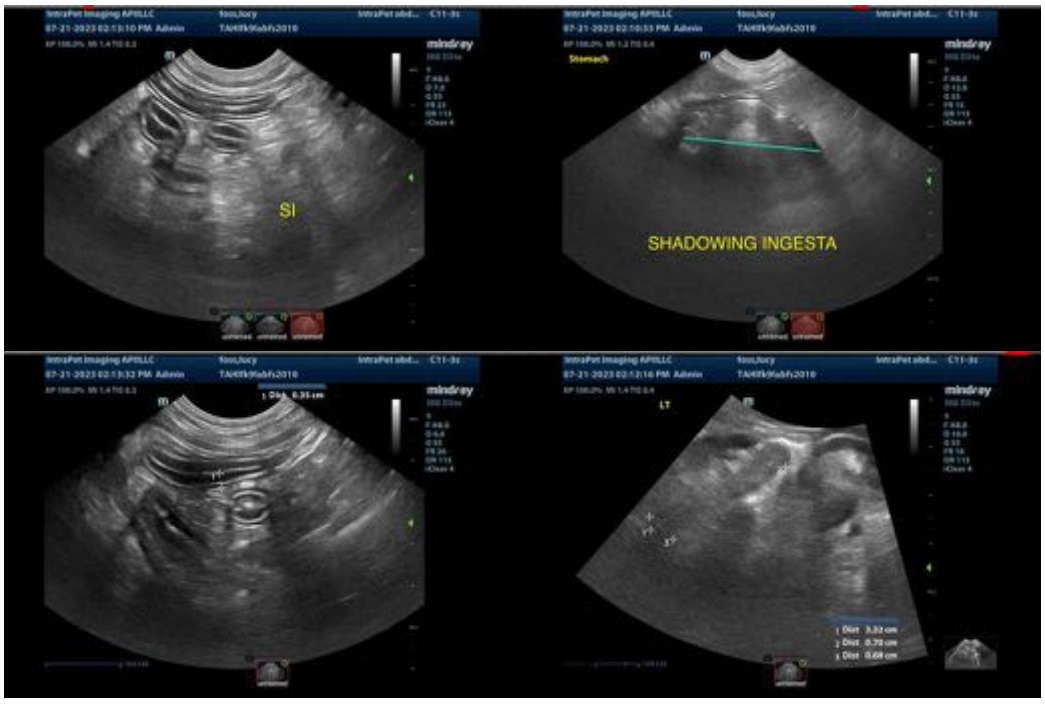
Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc. to further evaluate for pancreatic/small intestinal disease.

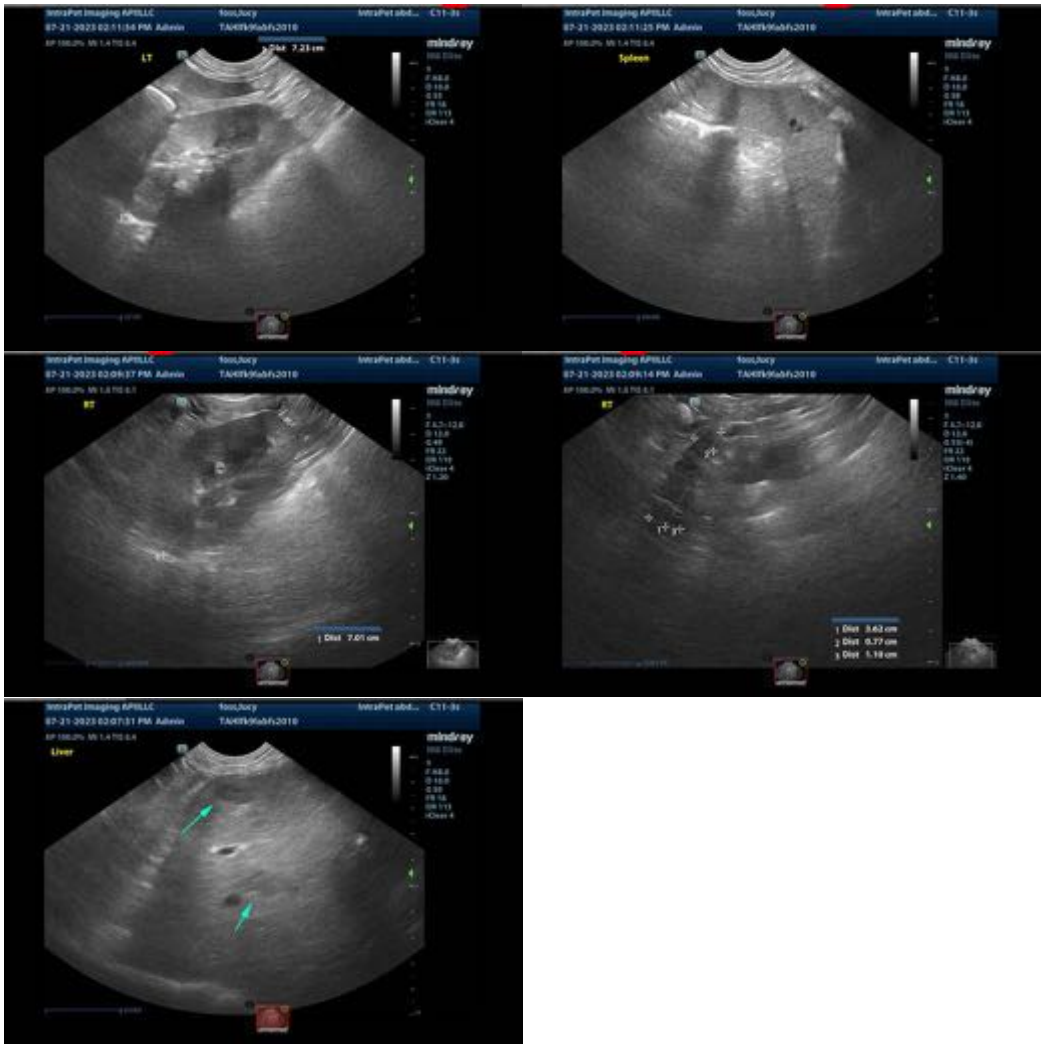
Recommend chronic probiotic therapy.

Also correlate the use of nonsteroidal anti-inflammatories, as the BUN levels and borderline anemia could be consistent with GI ulceration. If the patient is comfortable enough to discontinue, a trial of two weeks off could be considered, combined with anti-ulcer therapy.

The borderline low albumen is concerning. Consider a liver function test and evaluation of urine protein: creatinine ratio to rule out liver and kidney, as a source of protein loss. If a primary protein-losing nephropathy is strongly suspected, and symptoms are persistent, recommend obtaining GI biopsies.

The significance of the hepatic changes described are unknown, particularly in the absence of liver enzyme elevations. This could represent benign regenerative nodules, etc. If concerns arise, a liver function test and/or a fine-needle aspirate of the liver could be considered.





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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