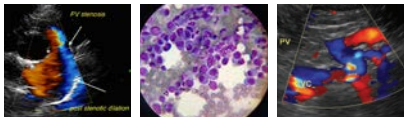
IMAGING PERFORMED BY

IntraPet.com



SonoPath

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DATE

7/18/23

PATIENT

Foxy Landry

SPECIES

Canine

BREED

Cairn Terrier X

SEX

Spayed Female

AGE

7/9/10

WEIGHT

40.2 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Northwind AH

REFERRING VET

Dr. Russ

INVOICE

44083

PRESENTING CLINICAL SIGNS

Master Problem List: Heart murmur and L sided heart failure - well controlled with meds
Gi upset - Chronic vomiting and diarrhea, Lethargy, Anorexia. P was dx with Congestive Heart failure in early February, responded well to tx and has been well controlled on meds. April P presented for first episode of GI upset with Vomiting, diarrhea and extreme lethargy. P was treated with supportive care and made mild improvements but was not 100% appetite was still decreased (even with entyce) and diarrhea persisted, brought back in for radiographs and BW - no significant findings. Refilled abx and sent home oral cerenia, P improved Stool became a bit more formed but never solid. Continued to monitor and treat supportively, had discussed US with O but O had elected to hold off. When trying to add ondansetron P became incontinent and leaked urine in her sleep so I stopped that. Ps appetite has never fully recovered, and diarrhea / soft stool is still present. GI panel shows decreased b12 and elevated TLP, initiated b12 therapy and tried clavamox, Ps appetite is still decreased and P has had 1 more incident of vomiting - mucous.

Current Medications: Current - cerenia 1/2 tab SID, Furosemide 40 mg - 1/2 tab BID, Benazapril 5 mg BID Vetmedin 5 mg BID.
Lab Results: B12 decreased (257), TLI >50, SDMA mild elevation.
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 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (6.08 cm). Overall echogenicity is normal with adequate 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 (6.02 cm). Overall echogenicity is normal with adequate 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 0.84 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 0.53 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 large and irregular with rounded 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 "mass effects"/irregular areas with rounded margins. Examples measure 2.8, 1.56, and 2.19 cm in diameter.

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 contains minimal luminal contents. 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 layers 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 uniform diameter with minimal fluid distension. Wall thickness is increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Duodenum wall measures 0.52 cm. Jejunum wall measures 0.49 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

- Large, irregular, heterogeneous liver with ill-defined mass lesions – 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 irregularities noted could be consistent with large regenerative nodules, hyperplasia, etc. A neoplastic process cannot be ruled out.

- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

- Subjectively thickened small intestine – The bowel wall thickening could be consistent with inflammation, edema, or infiltrative neoplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

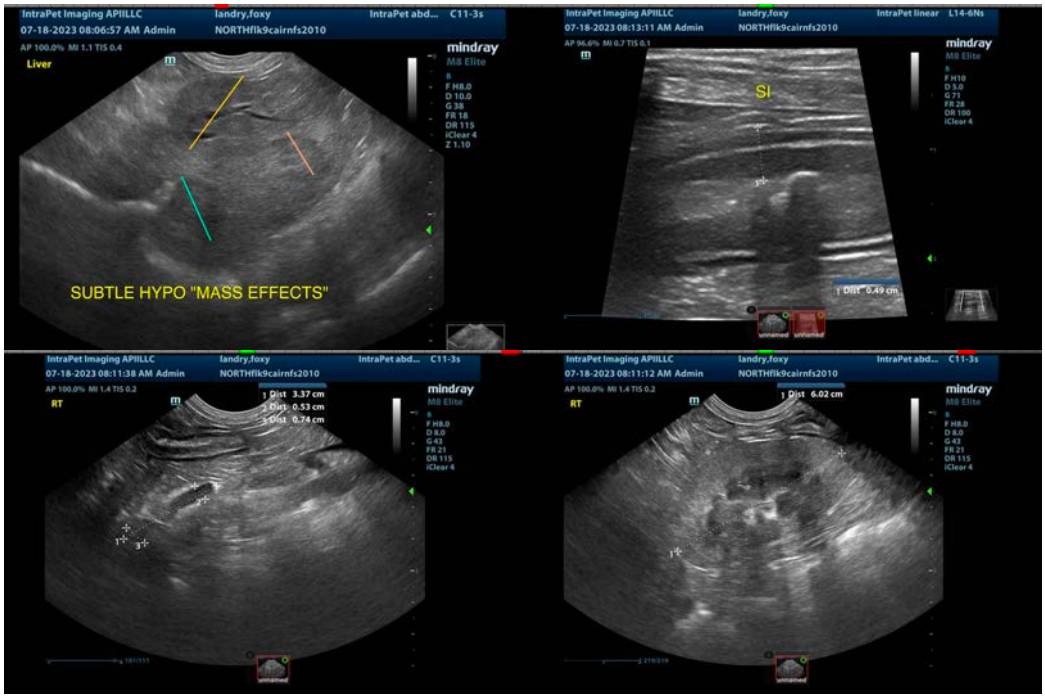
Based on the appearance of the small bowel, the borderline low albumin and low cobalamin levels, a primary enteropathy is thought very likely. At this point you have tried many elements of empirical therapy. If not already done, consider the following:

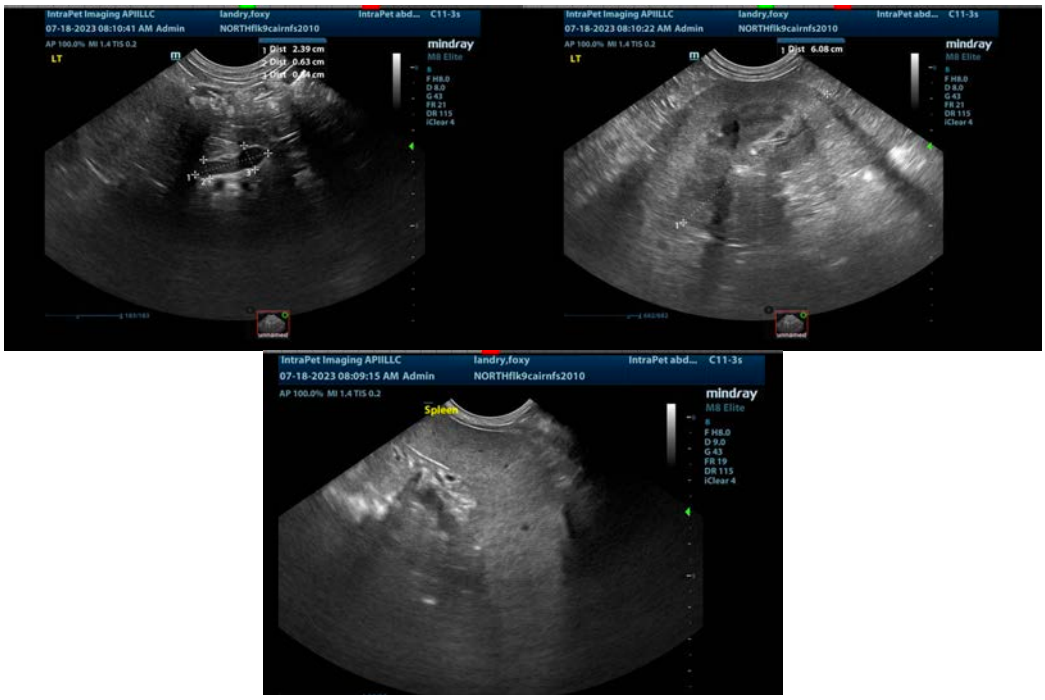
- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Recommend chronic probiotic therapy.

If these steps have been taken and symptoms persist, consider obtaining GI biopsies, looking for underlying inflammatory disease, less likely neoplastic change, etc.

The liver is irregular with rounded margins and ill-defined hypoechoic “mass effects”. These could represent atypical regenerative nodules, etc. The significance is uncertain, given the lack of liver enzyme elevation. Consider a liver function test and a fine needle aspirate of the liver.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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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