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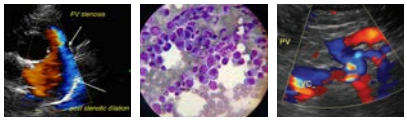

SonoPath
Clinical Sonography & Telecytology
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DATE

1/31/23

PATIENT

Daddy Eubank-Warble

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

11/27/11

WEIGHT

7.75 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Cat Sense Feline Hospital

REFERRING VET

Dr. Sinclair

INVOICE

44628

PRESENTING CLINICAL SIGNS

Daddy presented for weight loss 2 months ago. He was very thin, had stomatitis in spite of a full mouth extraction previously, He had several abnormalities on his bloodwork, including moderate anemia, hypoalbuminemia, hyperglobulinemia, hypoglycemia, mild azotemia with dilute urine. He was started on prednisolone 2.5mg bid and doxycycline 12.5mg bid for possible Mycoplasma haemofelis and also for his stomatitis. He has done well and gained weight (1/2 pound) in the past 2 months but he still has not improved much with the anemia and his albumin is still a little low.

Current Medications: Prednisolone 2.5mg bid for 2 months, Doxycycline 12.5mg bid for 2 months
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is significantly distended with mild primarily suspended echogenic debris present. 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 calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

The left kidney has a normal shape and size (4.08 cm) with mild pyelectasia at 0.30 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 nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.97 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 0.35 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 0.31 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 (0.68 cm), 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 with smooth peripheral margins. The parenchyma is borderline mildly hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a mixed echogenic hyperechoic nodule visualized on the right side of the liver measuring 1.82 cm x 1.88 cm.

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 bile duct is mildly prominent and tortuous, measuring 0.27 cm.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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 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 0.23 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 left limb of the pancreas is prominent and hypoechoic as compared to the surrounding isoechoic 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.

PRIMARY FINDINGS

- Decreased corticomedullary distinction in both kidneys with mild left-sided pyelectasia – The bilateral renal findings are consistent with age-related change. Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

- Prominent, hypoechoic left pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

- Borderline hyperechoic liver with a hyperechoic nodule visualized on the right side – Hepatic changes are non-specific and could be consistent with hepatic lipidosis, inflammatory/infectious disease, infiltrative neoplasia, or other hepatopathy. The hyperechoic lesion visualized could represent a benign or neoplastic lesion. Recommend fine needle aspirate if possible.

SECONDARY FINDINGS

- ‘Mildly echogenic debris in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.

- Prominent, tortuous bile duct – This is likely an incidental finding. Recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

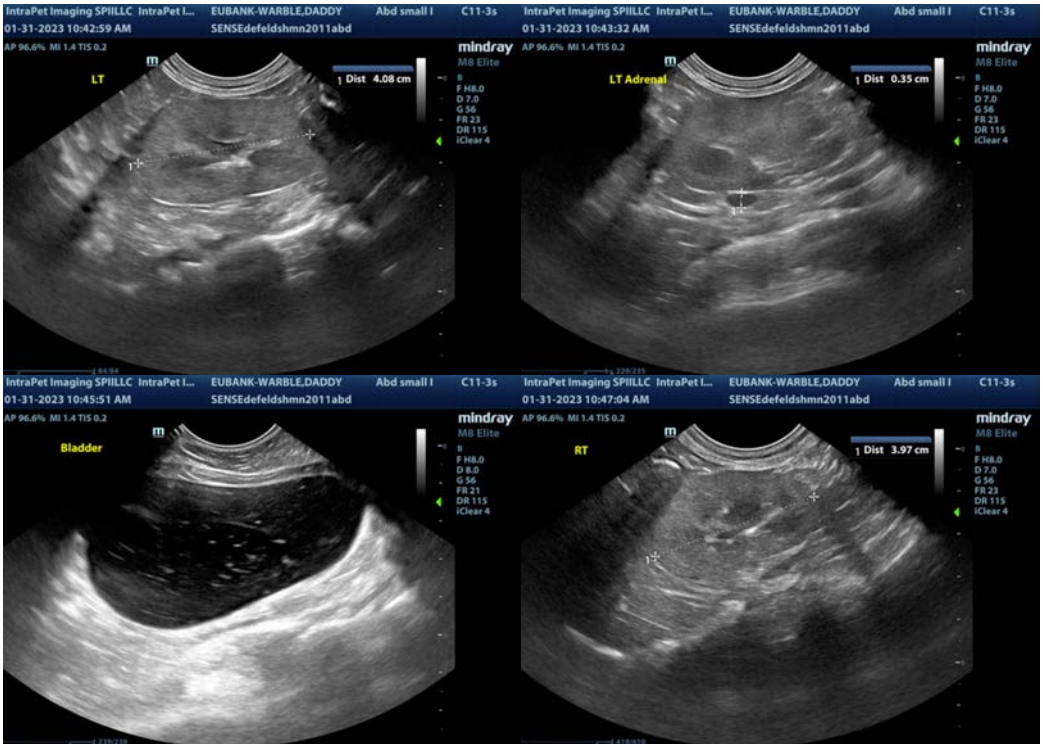
There is a hyper- to mixed echogenicity nodule visualized in the liver, and subjectively the liver appears slightly hyperechoic. Correlate this with liver values, Additionally, I would consider a liver function test based on the hypoglycemia and low albumin noted. The nature of the mixed echogenic nodule is unclear. This could represent a benign or neoplastic lesion. If possible, recommend a fine needle aspirate and close continued monitoring with ultrasound. Options moving forward would be continued monitoring with ultrasound or a contrast CT scan to consider surgical removal.

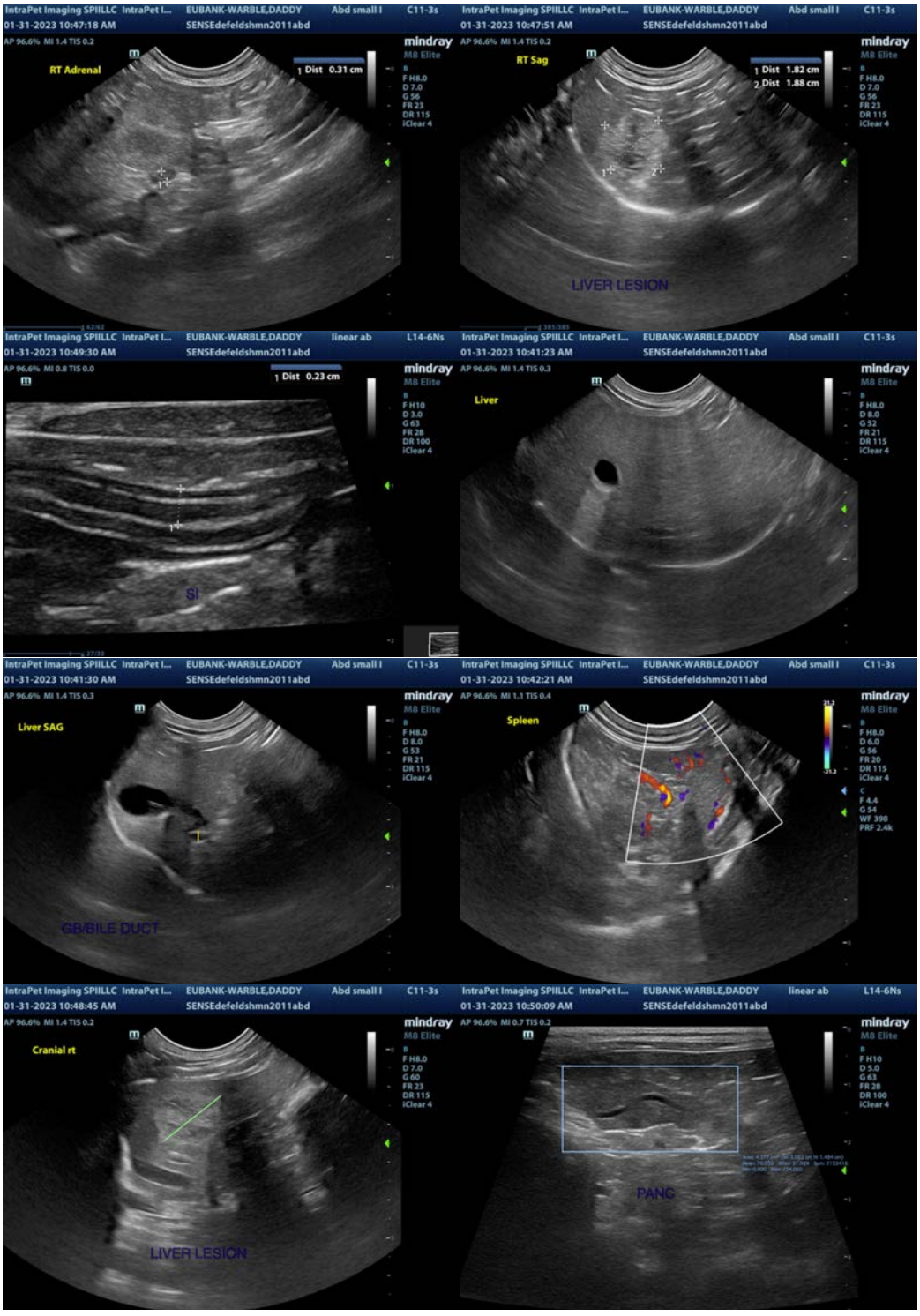
Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

Based on the low albumin reported and the elevated BUN combined with the anemia, I was concerned about the possibility of underlying GI bleeding. Recommend observation of the stool for possible melena. No significant focal or diffuse bowel lesions were observed, so the significance of this is unclear, but continued monitoring is warranted.

Additionally, the kidneys do have some reduced corticomedullary distinction and mild left-sided pyelectasia. Recommend a blood pressure, urinalysis and culture, and a urine protein to creatinine ratio, looking for possible protein loss from the kidneys.

It is not clearly obvious where the anemia is coming from in this patient. The urine is dilute and there is an elevation in BUN, so this could be an indicator of primary renal disease, but GI disease is also a concern based on the panhypoproteinemia and elevation in BUN. If underlying GI disease is suspected, you could consider a GI panel to Texas A&M for a qualitative fPLI, TLI, cobalamin and folate, looking for additional evidence of underlying gastrointestinal disease, which could warrant the possibility of GI biopsies. Your thoughts of possible infectious disease as a source for the anemia is valid. Testing for vector borne disease could be an additional consideration, and a pathologist review of the blood smear.

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RT Adrenal
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RT Sag
1 Dist 1.82 cm
2 Dist 1.88 cm
LIVER LESION
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Liver
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mindray M8 Elite
Liver SAG
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Cranial rt
LIVER LESION
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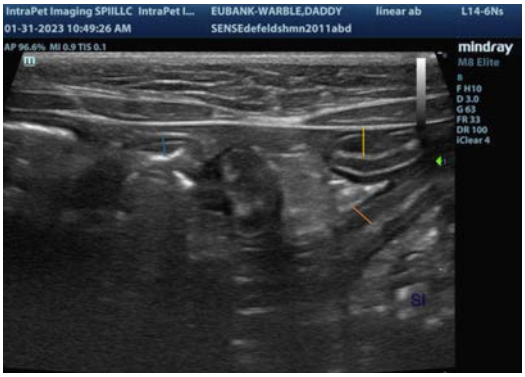
PANC



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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
kathleen.sennello@sonopath.com