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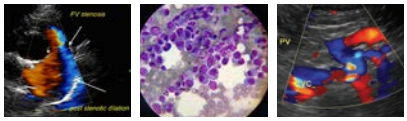

SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

12/7/21

PATIENT

Cookie Reightler

SPECIES

Feline

BREED

DMH

SEX

Spayed Female

AGE

1/2/11

WEIGHT

7.5 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Cat Sense Feline AH

REFERRING VET

Dr. Sinclar

INVOICE

33329

PRESENTING CLINICAL SIGNS

History: Initially presented in October for eating very little for several days. She had lost 4 pounds since she was last seen in July 2020. Aside from the weight loss and grade 2-3/6 heart murmur, the rest of her PE was fairly normal. In-house bloodwork was performed and her ALKP was elevated at 299 but the rest was normal. Bloodwork was sent out and her bili was just very slightly elevated. Her BNP was also very slightly elevated. She was treated with Cerenia, Gabapentin and Cyproheptadine and she started eating well.
She came back for a follow-up visit and now all of her liver values are elevated. She has been eating well but only gained 2oz. Concerned about hepatic neoplasia vs cholangiohepatitis and/or intestinal neoplasia.

Lab Results: ALT 174 U/L 27 – 158, AST 83 U/L 16 – 67, ALKP 568 U/L 12 – 59, GGT 9 U/L 0 – 6, BILIRUBIN 0.8 mg/dL 0.0 - 0.3. Attached separately.
Radiographs: Attached separately.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
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, 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 (4.19 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 (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 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 0.54 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 0.34 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 large in size (1.2 cm in diameter at the level of the hilus). The spleen echotexture is heterogenous and mottled, 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 hypoechoic. 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 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 with some pinpoint small stones/mineralizations. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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 uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measured 0.41 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. Areas of distal colon are visualized, which appear thickened with a loss of layering, measuring up to 0.6 cm in thickness.

Pancreas

The pancreas is large 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. Prominent pancreatic duct noted at 0.33 cm.

Free Abdomen

Scant anechoic free abdominal fluid is present. There is a significant mesenteric lymphadenopathy present with a cluster of lymph nodes at the mesenteric root measuring 0.74, 0.71, and 0.78 cm. The omentum is generally of increased echogenicity.

PRIMARY FINDINGS

- Large, 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, mottled spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

- Prominent and hypoechoic pancreas with prominent pancreatic duct – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- Thickened small intestine with prominent muscularis – The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma.

- Thickened colonic wall with reduced detail of wall layering – Differentials include inflammation, infection, edema and neoplasia.

- Moderate mesenteric lymphadenopathy – The moderate mesenteric lymphadenopathy is most concerning for a neoplastic process, although you can see significant lymphadenopathy in some

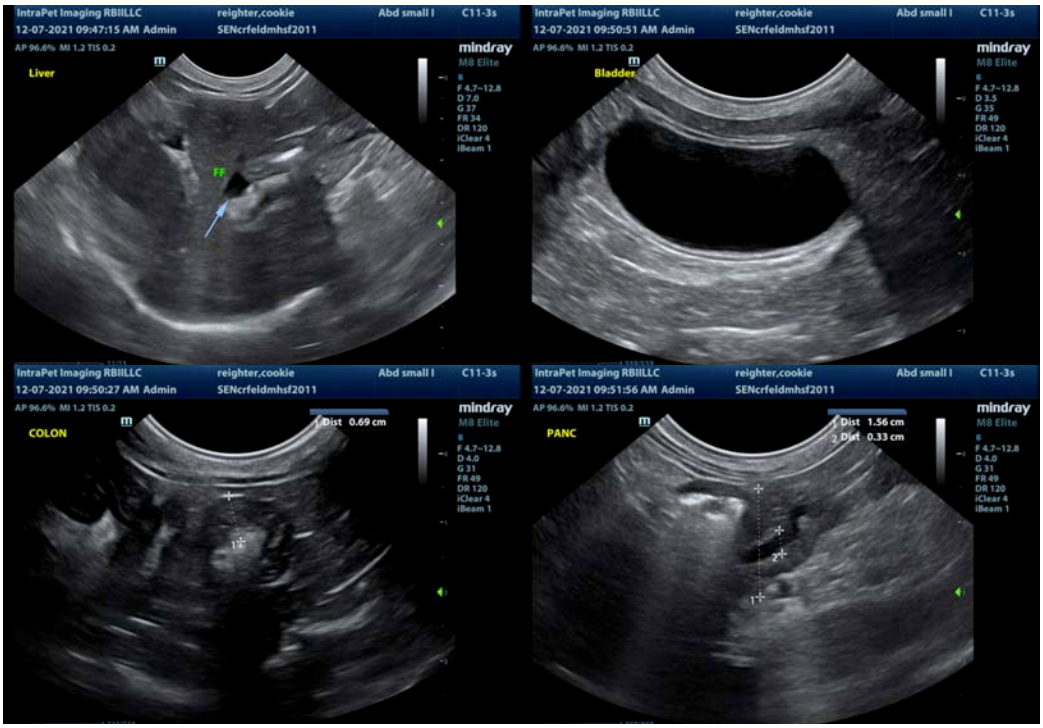
cases of autoimmune/inflammatory disease, infectious disease(tick born disease-such as bartonella, fungal infections, FIP (cats)) etc. A fine needle aspirate with cytology is recommended for further evaluation.

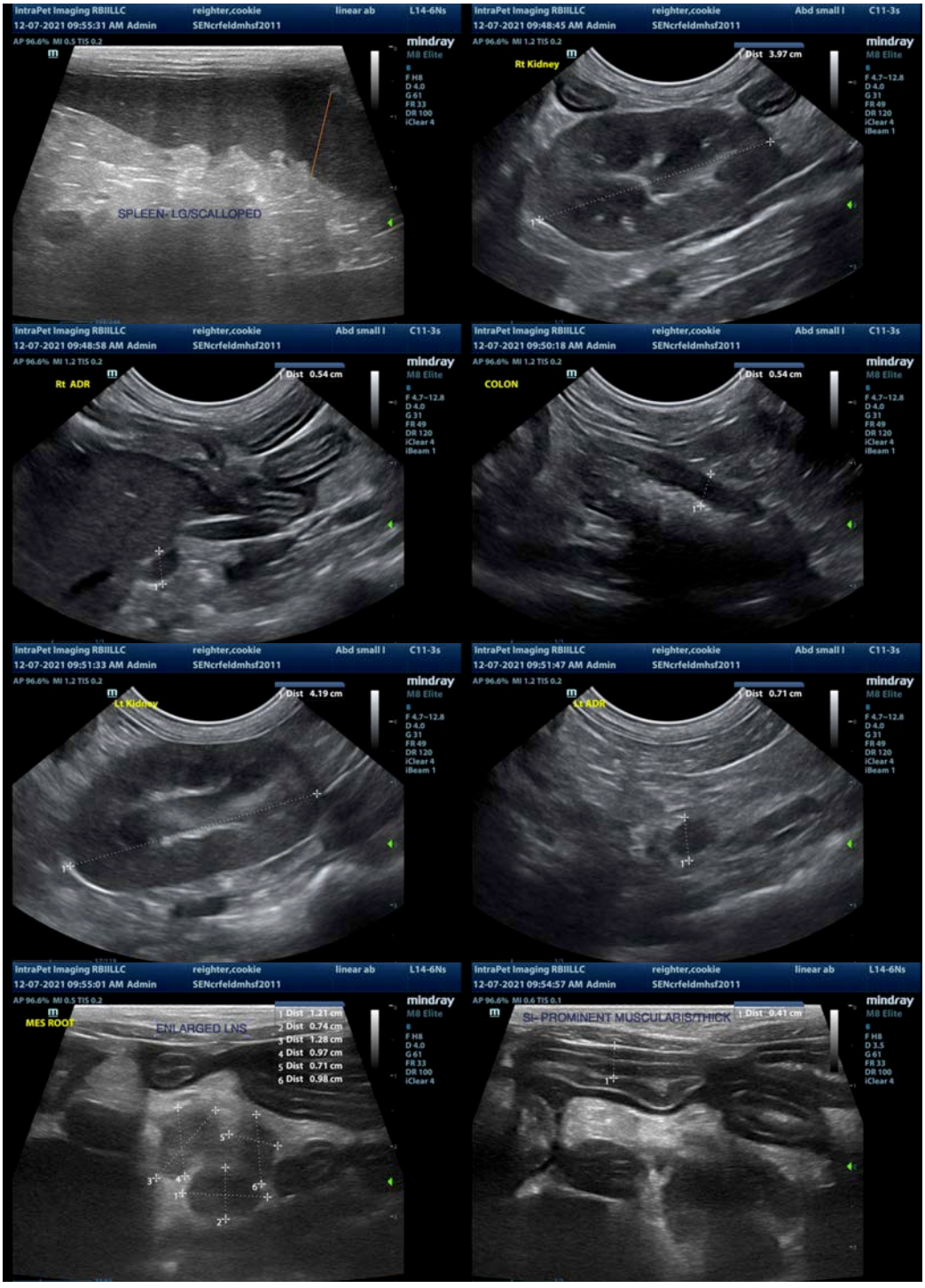
SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The combination of the enlarged liver and spleen with thickened bowel and prominent mesenteric lymph nodes is concerning for possible round cell neoplasia, although no discreet mass effects are visualized. Recommend a fine needle aspirate of the liver and pre- and post-prandial bile acids. Also consider a fine needle aspirate of a mesenteric lymph node. Based on the ultrasound findings, biliary disease is unlikely to be a major issue. If a fine needle aspirate is not diagnostic, then consider biopsy of liver, bowel, lymph node etc. If aspirates and biopsies are not a possibility, you could consider treatment for cholangiohepatitis/IBD/pancreatitis. Recommend a GI panel to Texas A&M to evaluate a quantitative PLI, TLI, cobalamin and folate, but obtaining a diagnosis would be preferable.

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MES ROOT
ENLARGED LNS
1 Dist 1.21 cm
2 Dist 0.74 cm
3 Dist 1.28 cm
4 Dist 0.97 cm
5 Dist 0.71 cm
6 Dist 0.98 cm
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SI- PROMINENT MUSCULARIS/THICK
Dist 0.41 cm

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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