IMAGING PERFORMED BY

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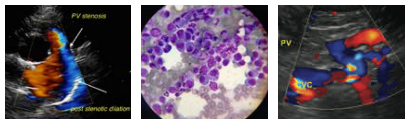

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DATE
9/24/21

PATIENT
Persephone Griffin

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Spayed Female

AGE
6/21/07

WEIGHT
11.81 lbs

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

HOSPITAL NAME
Festival VC

REFERRING VET
Dr. Lomax

INVOICE
91968

PRESENTING CLINICAL SIGNS

History: Hyperthyroid - started Methimazole and started work-up for Radiocat. Elevated LFT's including Total Bilirubin and GGT. Hepatopathy secondary to Methimazole? Is asymptomatic.
Current Medications: Methimazole 2.5mg PO QD.
Lab Results: ALT, AST, and ALKP have all increased and now GGT and Total Bilirubin are elevated. Serum was mildly icteric as noted by technicians.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: Not needed.
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 small size (2.18 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. Moderate pyelectasia was noted and measured 0.56 cm. Several, large, non-obstructive nephroliths were located in the renal pelvis. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.12 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. Several large, non-obstructive nephroliths were noted. The largest measured 0.66 cm, 0.56 cm and 0.34 cm. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.47 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 region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. 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 normal in size, and 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. No focal nodules or cystic lesions are observed. The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. 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. The jejunum measured 0.3 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 prominent and hypoechoic as compared to the surrounding isoechoic mesentery. The pancreatic duct was dilated and prominent measuring 0.37 cm. 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. There is a mild lymphadenomegaly present. There is a cluster of mesenteric lymph nodes around the ileocecal junction measuring 0.41 cm, and 0.33 cm. There was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of increased echogenicity around this cluster of mesenteric lymph nodes.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- Decreased corticomedullary distinction in both kidneys with non-obstructive nephroliths.
- Moderate left-sided pyelectasia. Some of the nephroliths are within the renal pelvis and may at some point caused an obstruction or in the future cause an obstruction. Pyelectasia of the left/right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Prominent, hypoechoic pancreas with a dilated pancreatic duct. The pancreatic changes are most consistent with moderate pancreatitis/pancreatic infiltration. I recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider FNA if not improving.
- Prominent muscularis layer to the small intestine. The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma.
- Mildly heterogenous 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.

SECONDARY FINDINGS:

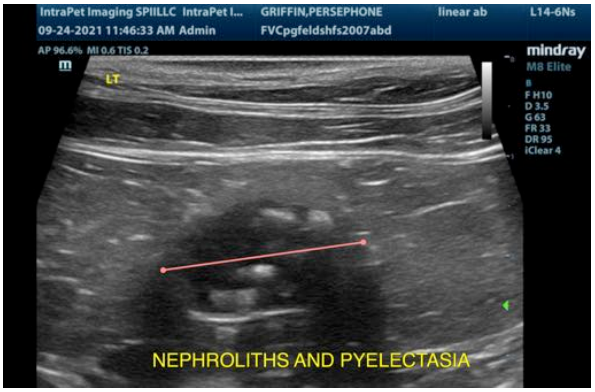
- Prominent mesenteric lymph nodes. The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

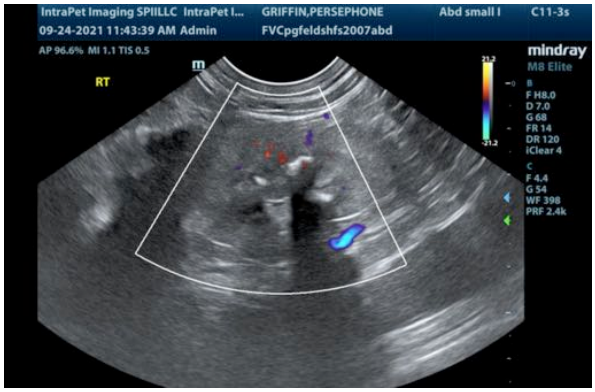
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

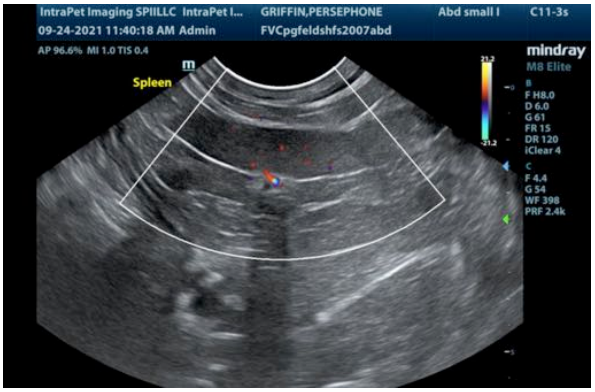
The hepatic changes observed were very mild and could be consistent with age related change. There is no evidence of biliary abnormalities so a primary hepatopathy is most likely. A toxic hepatopathy due to Methimazole is a possibility.

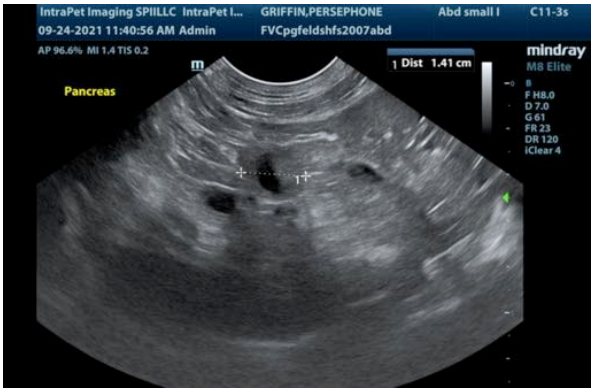
Additionally there are changes associated with the pancreas, small intestine and kidneys. I recommend urinalysis and culture to rule out pyelonephritis. Consider a GI panel with a quantitative fPLI, B12 and folate to look for evidence of concurrent pancreatic and small intestinal disease.

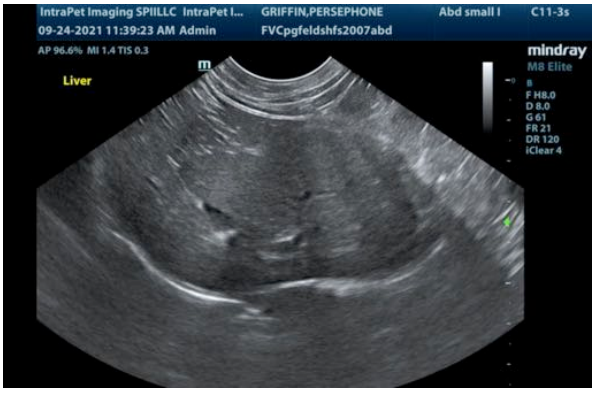
I recommend to discontinue Methimazole and institute supportive care for acute liver injury. If blood work values do not improve then consider a FNA of the liver or liver biopsy.











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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