IMAGING PERFORMED BY

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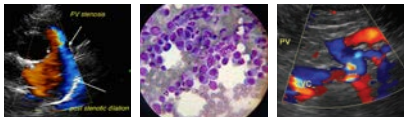

SonoPath

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DATE

1/5/22

PATIENT

Lily Shishineh

SPECIES

Feline

BREED

DMH

SEX

Spayed Female

AGE

12/12/08

WEIGHT

13.8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Frederick Road VH

REFERRING VET

Dr. Beyer

INVOICE

33988

PRESENTING CLINICAL SIGNS

History: weight loss (2.2 lbs over a year); on/off vomiting and couple on/off episodes of diarrhea; chronic history of cystitis both bacterial and sterile. Most recent routine bw revealed UTI-appears to be asymptomatic (not increase in WBCs in urine and USG is not dilute). Owner is extremely attentive-NO clinical signs of any urinary issues at this time; acting absolutely normally, all urinary habits, etc are wnl.

Current Medications: eats RC multifunction urinary/hydrolyzed protein (has for long time), Cerenia PRN.
Lab Results: Attached separately. BP: 150 mmHg systolic with doppler. T4 4 (0.8-4.7), FREE T4 4.1 ng/dL 1.2 - 4.3, FREE T4-ed (pmol/L) 52.8 pmol/L 15.4 - 55.3, globulins low normal; albumin wnl. c/s revealed Enterococcus faecalis AND Isolate 2: E. coli
the e. coli is developing some resistance to oral options
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 (3.45 cm) with mild pyelectasia at 0.22 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 nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.44 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 0.33 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 mildly heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No nodules or mass effects are visualized, but there are occasional hyperechoic shadowing small stones visualized within the parenchyma, most consistent with intrahepatic biliary minerlaizations.

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. Duodenum wall measured 0.33 cm. Jejunum wall measured 0.21 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 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

- Decreased corticomedullary distinction in both kidneys with mild left-sided pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the left kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

- Mildly heterogeneous liver with suspected small intrahepatic biliary stones – The hepatic changes are consistent with age-related parenchymal remodeling and are not considered clinically significant at this time. If liver values are currently normal, the biliary stones are likely an incidental finding. No evidence of an obstruction is visualized.

- 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. This can be an incidental finding in some older cats.

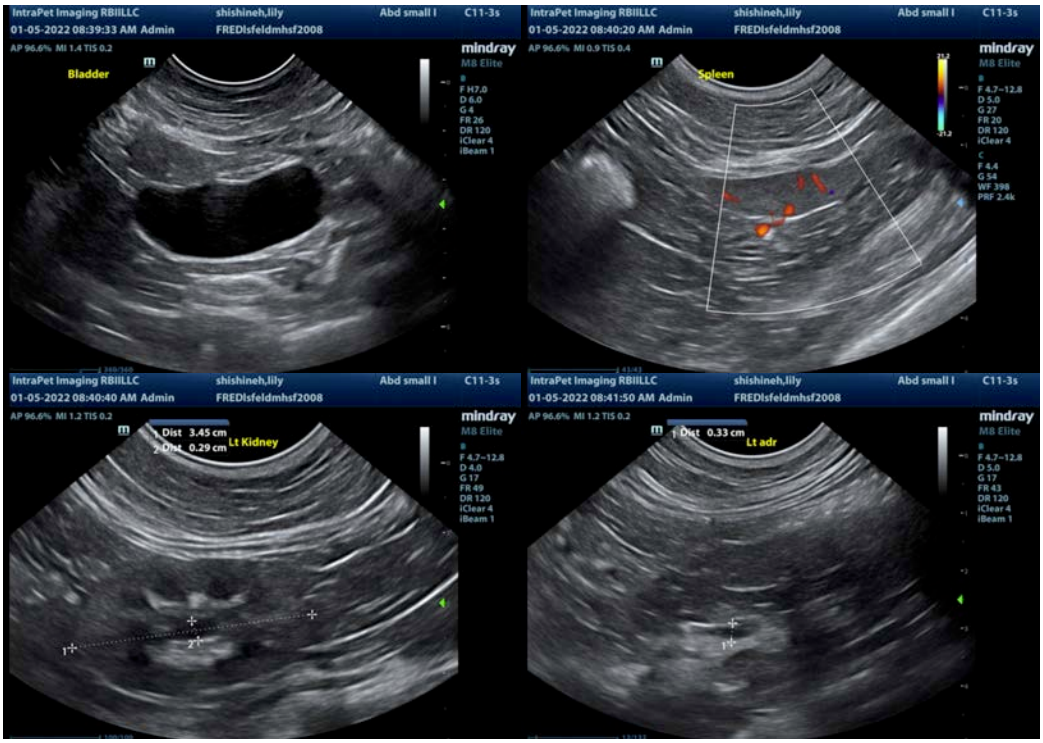
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

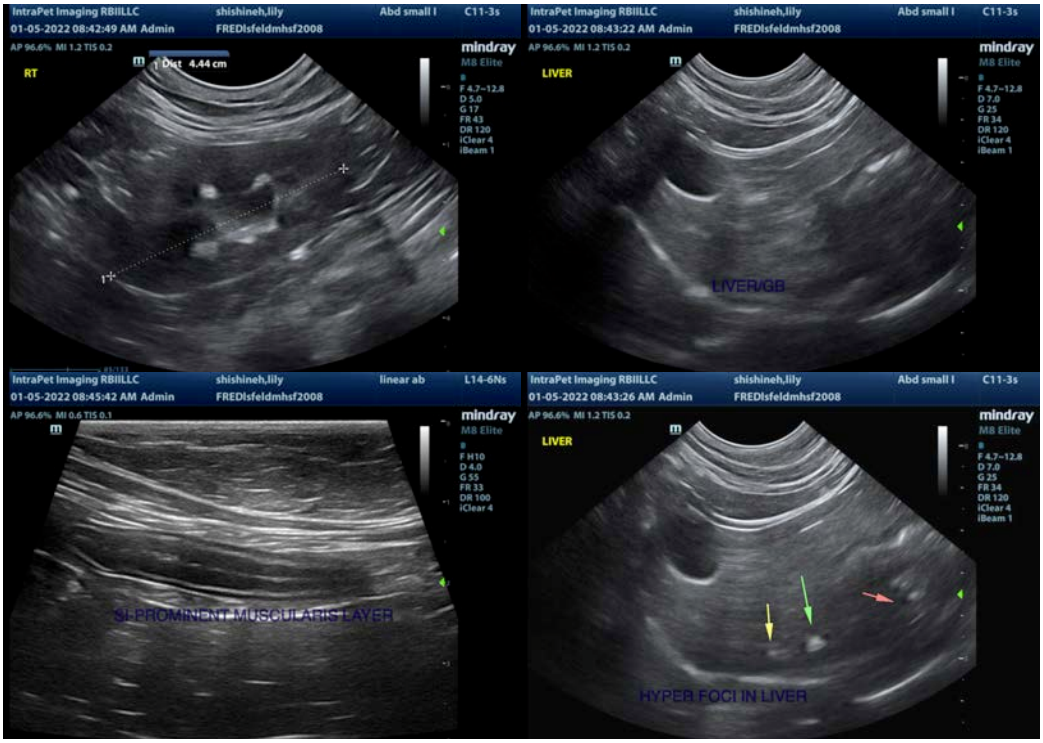
The changes observed in the urinary tract could be consistent with age related changes, PU/PD, or a previous or current pyelonephritis. The dilation is mild. These cases can be very challenging. I suspect that if you tried to treat this infection with antibiotics based on the prescribed spectrum, you would be unsuccessful. This combination of E. coli and enterococcus is very difficult, and is only made worse by chronic antibiotic therapy. Therefore, it can be very difficult to make a treatment plan. If not currently implementing probiotic therapy, this would be very important, and may be linked to the vomiting and diarrhea reported. It is impossible to say

at this point if this cat has pyelonephritis or not, but if it is feeling well, I would be inclined to start a probiotic and monitor very closely. These cases need to be religiously cultured and never treated without culture results. When they are treated, I typically recommend a culture mid treatment to ensure that the infection is gone, and then another culture one week after discontinuing treatment, and so on with routine cultures and urinalysis guiding your therapy in addition to close monitoring of clinical sings. No obvious anatomic cause for the recurrence is noted. Consider any neurologic deficits, difficulty emptying the urinary bladder, etc.

Also recommend frequent monitoring of bloodwork and renal values. If this patient becomes newly azotemic, is not feeling well, is febrile, then I would treat for pyelonephritis with 4-6 weeks of antibiotics per culture recommendations with intermittent cultures while on antibiotics to ensure resistance hasn't occurred during therapy. The longer you can wait out this infection without treatment, the more likely it is to down regulate to a less resistant strain, but obviously there is the concurrent risk of pyelonephritis, so you must do your best to rely on clinical judgement. VIN can be an excellent source for ideas and recommendations.

No focal lesions were observed in the GI tract to explain the vomiting and diarrhea reported. It could certainly be related to dysbiosis and chronic antibiotic use if that has been necessary, and again I recommend probiotic therapy chronically. You're doing a good job with using a hydrolyzed protein or novel protein prescription diet. I would try to refrain from the use of any immunosuppressives (Prednisone, etc.) due to the urinary tract infections reported.





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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