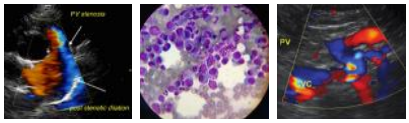
IMAGING PERFORMED BY

IntraPet.com



SonoPath
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DATE
7/8/22

PATIENT
Matilda Fisiy

SPECIES
Canine

BREED
Kelpie Mix

SEX
Spayed Female

AGE
7/7/13

WEIGHT
27.2 Pounds

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

HOSPITAL NAME
Animal Emergency Hospital

REFERRING VET
Dr. Silva

INVOICE
16541

PRESENTING CLINICAL SIGNS

History: rDVM of 7/6: ALT H 900 U/L AST H 319 U/L ALP H 639 U/L GGT H 30 U/L tBili H 2.7 mg/dL Referral for elevated liver values For the last few weeks, Matilda hadn't wanted to eat her food. Switched to 3 different diets, will eat the cat food and will eat treats. No vomiting noted. Not pooping on Monday and Tuesday and was concerned. Went to Perry Hall not her usual vet usually goes to Parkville. Owner didn't bring records but, is up to date, will check if she has had lepto vaccine when she gets home. Went to Perry Hall yesterday had bloodwork sent out and they called today once bloodwork came back. Referral for IV fluids and ultrasound

Current Medications: Buprenorphine.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. The bladder wall is mildly irregular. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris. The bladder wall measures 0.37 cm.

The left kidney has an irregular shape, likely due to previous infarcts, measuring 5.09 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 or hydroureter. Renal vasculature is normal. Pyelectasia was noted, measuring 0.47 cm.

The right kidney has a normal shape and size (5.67 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. Pyelectasia was noted, measuring 0.22 cm.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.63 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 0.5 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 irregular. 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. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is moderately dilated with large fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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. The duodenum measured as normal (between 0.3-0.5 cm in wall thickness) and the jejunum measured as normal (0.34 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

- Heterogeneous irregular 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 amount of echogenic dependent debris in the urinary bladder with mildly irregular bladder wall

- Decreased corticomedullary distinction in both kidneys with mild pyelectasia

- Large amount of shadowing material within the gastric lumen. Shadowing material in the gastric lumen - correlate with feeding history and abdominal radiographs. If this patient was adequately fasted consider such differentials as delayed gastric emptying, ingested foreign material or a partial outflow tract obstruction (none observed.)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal lesions are visualized associated with the liver, but it does appear somewhat hypoechoic and

heterogeneous. The scan today supports a primary hepatopathy, as no severe biliary changes were observed.

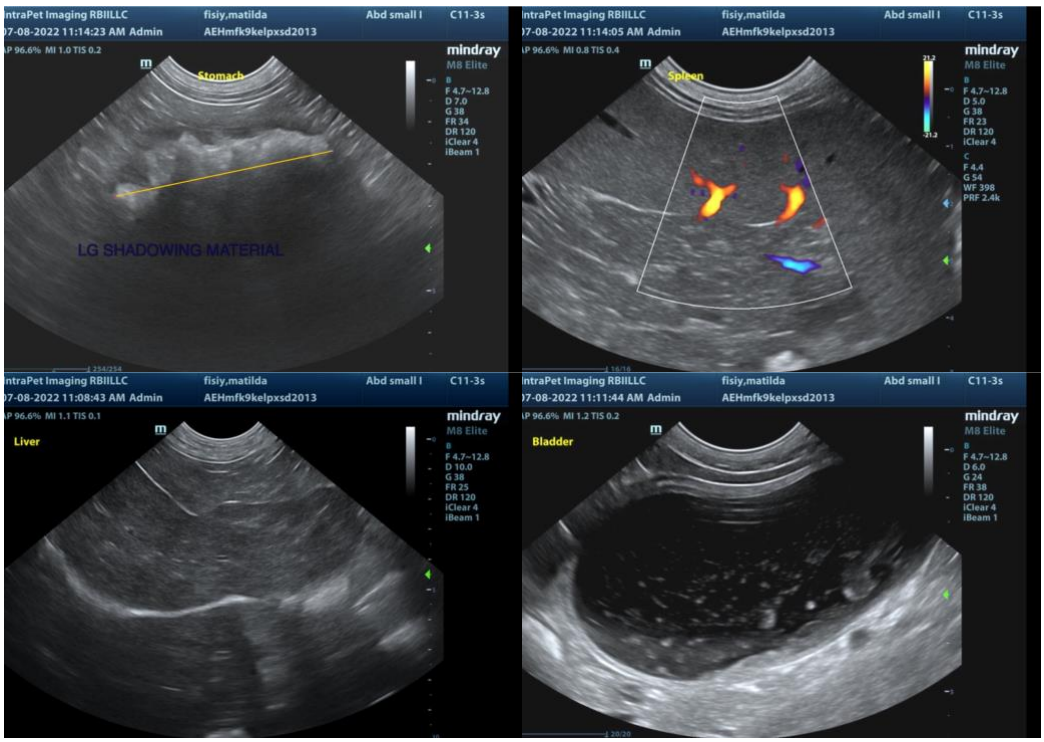
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)
- If no response to supportive care (denamarin, fluids, antibiotics,+/- ursodiol etc...) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

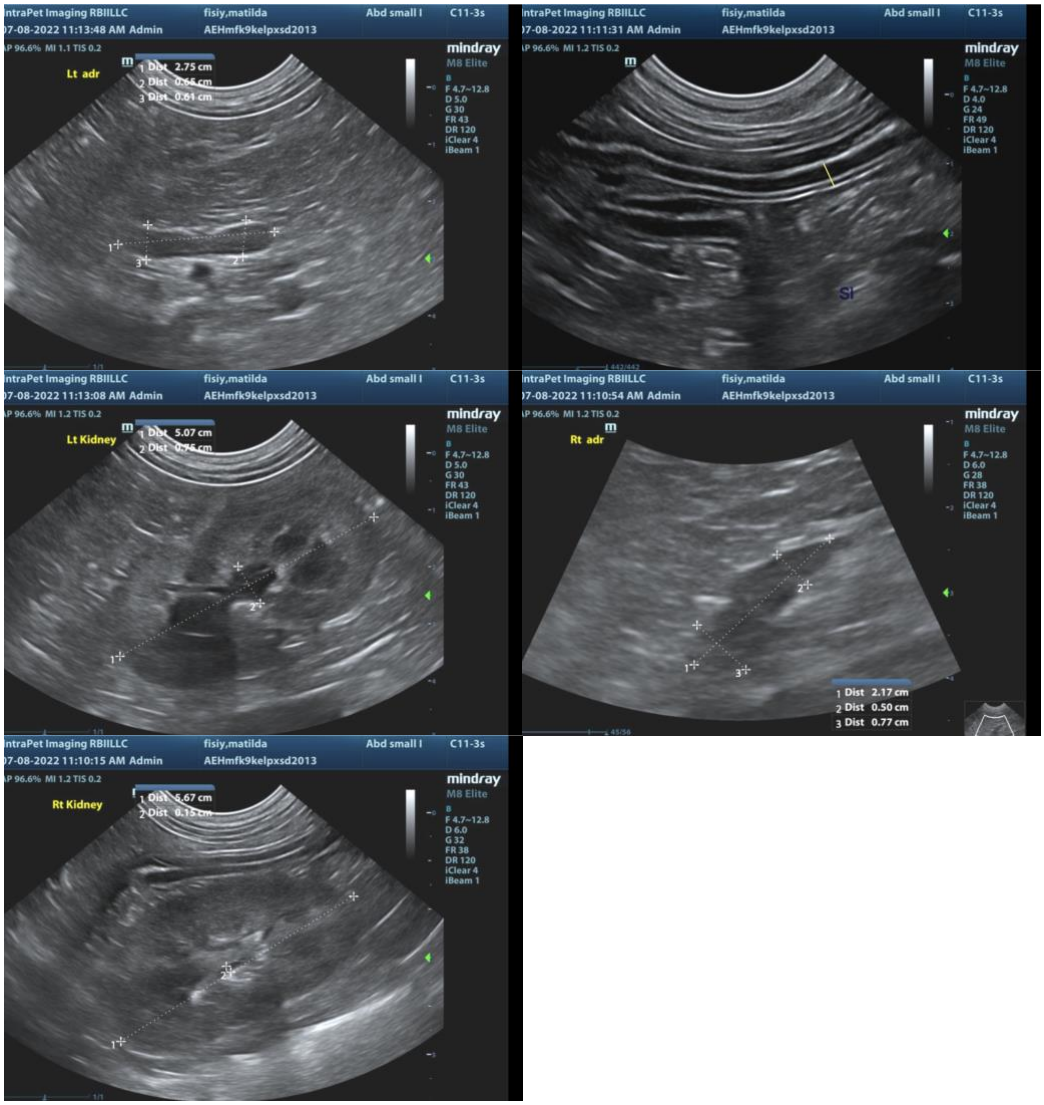
There is a large amount of dependent debris in the urinary bladder and the urinary bladder wall is mildly thickened and irregular. I recommend urinalysis and culture and continued monitoring, as underlying neoplasia seems unlikely but cannot be definitively ruled out.

The changes observed with the kidneys are most consistent with chronic progressive change, although the renal pelvic dilation could be associated with pyelonephritis. I recommend urinalysis and culture (as recommended above).

There is a large amount of ingesta in the stomach. Correlate this with the feeding history and abdominal radiographs, as ingested foreign material cannot be definitively ruled out.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.





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.

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