

**DATE PRESENTING CLINICAL SIGNS**

1/31/23

Dog not seen for 2 1/2 yrs prior to appointment 1/27/23. Initial owner's complaint were blood in stool beginning 1/18/23 which has since stopped but diminished appetite, PU/PD with voiding in the house.

PATIENT

Ginger Kuklane

Physical examination: Temp 101.1 Poor body condition with diminished muscle mass (generalized), pendulous abdomen with palp enlarged liver but no abdominal pain to palpation, unkempt hair coat and very significant upper respiratory tract stridor.

SPECIES

Canine

Current Medications: Clavamox 187.5 mg BID with improvement of clinical signs of PU/PD

Lab Results: WBC 65.0 (Neutrophilia with band cells evident and elevated monocytes and low eosinophils). Mild anemia (36.7% hct), Chol - 893 (131-345), Alkp - 4311 (6-160), ALT - 173 (18-121), GGt - 20 (1-13), Alb - 2.6 (2.7-3.9), Glob - 4.8 (2.4-4.0), Calcium 12.5 (8.4-11.8), Thyroid (total T4) - 0.5 (1.0-4.0 ug). U/A - SG 1.009, Protein +3, WBC > 100/hpf, RBC 6-10/hpf

BREED

Beagle

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

SEX

Spayed Female

Imaging Performed By: Rachel Brillhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**AGE**

3/2/11

Urinary System

The urinary bladder is moderately 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.

WEIGHT

32 Pounds

The left kidney has a normal shape and size (5.73 cm) with mild pyelectasia at 0.18 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 hydronephrosis. Renal vasculature is normal.

INTERPRETED BY

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

The right kidney has a normal shape and size (5.98 cm) with mild pyelectasia at 0.28 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 hydronephrosis. Renal vasculature is normal.

HOSPITAL NAME

Fork Vet Hospital

Adrenal Glands

The left adrenal gland is large and hypoechoic, measuring 1.04 cm in width at the caudal pole. It is observed in its normal position cranial to the left renal artery.

REFERRING VET

Dr. Doherty

The right adrenal gland is large in size and hypoechoic, measuring 1.04 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.

INVOICE

44622

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 large and slightly irregular with rounded margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is an isoechoic, slightly mottled mass effect visualized in the caudoventral portion of the liver, measuring 5.7 cm x 3.94 cm.

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 to large amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is moderately dilated with 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 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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 mottled 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.

ULTRASONOGRAPHIC FINDINGS

- Bilateral adrenomegaly – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.
- Dependent echogenic debris in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.
- Decreased corticomedullary distinction in both kidneys with mild pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the kidney(s) could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Large, heterogeneous liver with isoechoic mass effect – 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. There is a round, ill-defined, isoechoic mass effect visualized. This likely represents a primary hepatic lesion, possibly an adenoma, hepatoma, etc., less likely an aggressive neoplastic lesion.

- Moderate/large gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

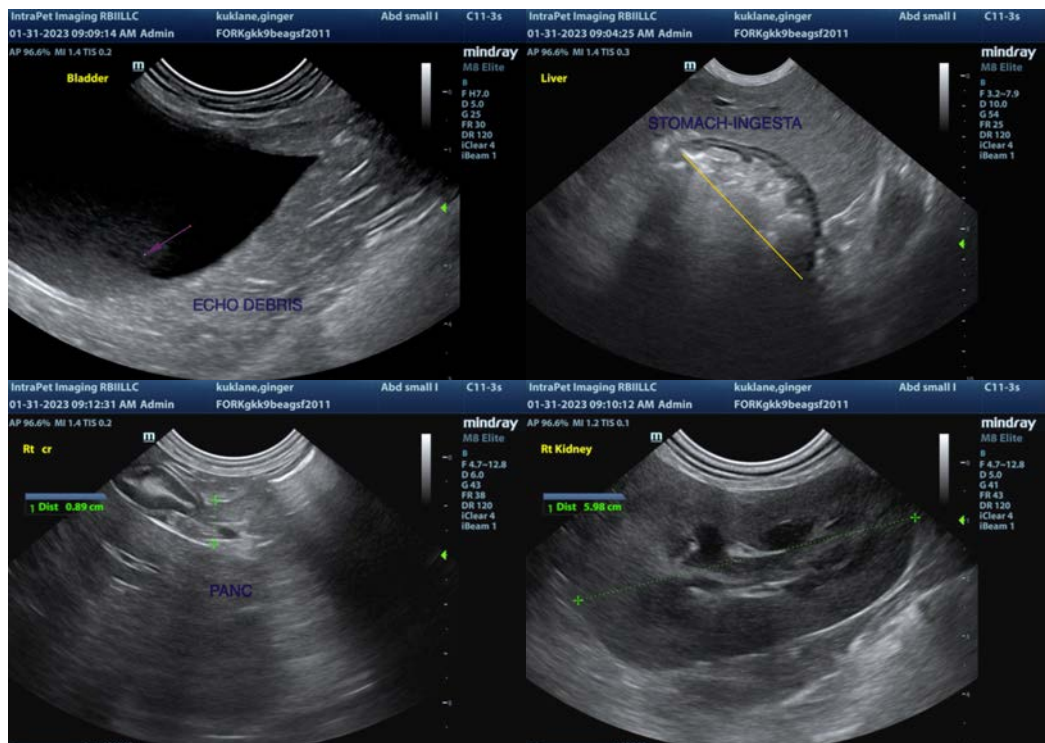
The combination of the enlarged adrenal glands and the large heterogeneous liver is suspicious for possible Cushing’s disease. Additionally, there is a focal mass effect in the liver, which could be contributing to the ALP elevation as well. This lesion is isoechoic and somewhat ill-defined, most consistent with a primary hepatic mass, likely a benign or slow-growing mass effect. Continued monitoring is warranted. If surgical removal is desired, consider a contrast CT scan. If surgical removal is successful, this would likely have a good prognosis.

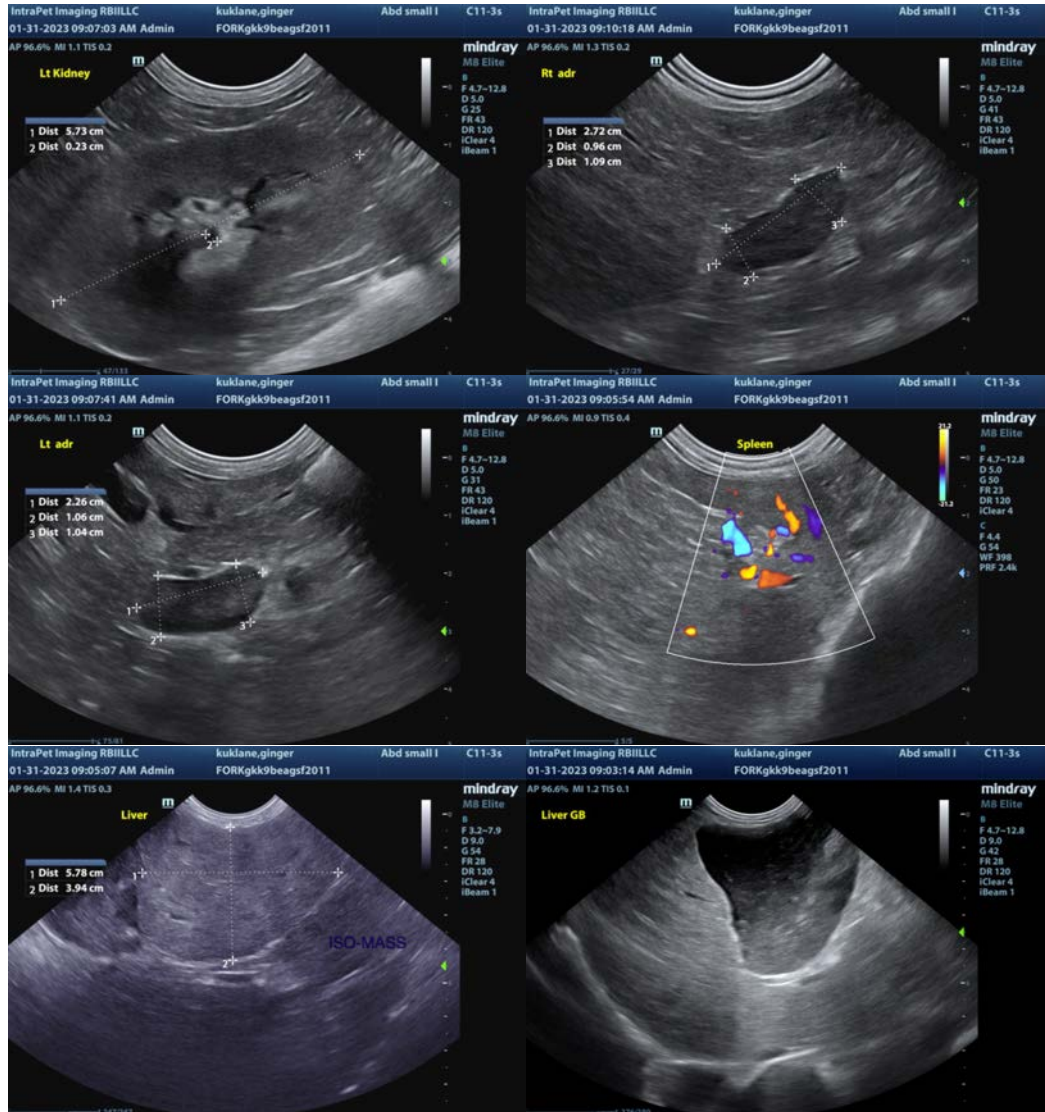
The changes in the kidneys are somewhat non-specific and likely age related, but the combination of the active urine sediment, the dependent debris in the urinary bladder, and the mild pyelectasia is concerning for possible pyelonephritis. Recommend a urinalysis, culture, and appropriate antibiotic treatment.

An obvious cause for the inappetence and not feeling well is not observed, but consider pyelonephritis/cystitis, or even mild pancreatitis, as the pancreas is slightly prominent in some regions. Additionally, there is a moderate to large amount of gallbladder sludge, but minimal surrounding inflammation. Recommend continued monitoring of the gallbladder.

If this patient is feeling better and develops symptoms consistent with Cushing’s disease, consider adrenal function testing and 3-view thoracic radiographs.

A serum calcium level is elevated on the submitted lab work. Recommend evaluation of an ionized calcium to determine if work up for hypercalcemia is warranted.





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.

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