

**DATE PRESENTING CLINICAL SIGNS**

9/2/21

History: Ongoing borderline renal disease and recent UTI. Recheck labwork showed new worsening liver value elevations. Advise geriatric screen.

PATIENT

Current Medications: preventatives only

Tiny Bickford

Lab Results: 8/24/21: ALKP 367, ALT 443, crea 1.9, AST 76, BUN 50, GGT 24, Trig 478. 7/23/21: ALKP 189, crea 1.9. 1/7/21: ALKP 200, ALT 202.

Radiographs: N/A

SPECIES

Date of Previous IntraPet Ultrasound: No previous.

Canine

Sedation: Not needed.

Stat Report: Not requested.

BREED

Terrier X

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Spayed Female

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. There is a round, hyperechoic structure visualized cranioventral to the urinary bladder. See description under "other".

AGE

2005

The left kidney has a normal shape and size (4.23 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. Non-obstructive nephroliths and mild pyelectasia (0.2 cm) noted. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

15.1 Pounds

The right kidney has a normal shape and size (4.4 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. Pinpoint non-obstructive nephroliths and pyelectasia (0.28 cm) noted. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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Adrenal Glands

The left adrenal gland is normal in size measuring 0.57 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.

HOSPITAL NAME

Everhart VH

The right adrenal gland is normal in size measuring 0.56 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.

REFERRING VET

Dr. AN

Spleen

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal.

INVOICE

25157

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 gall bladder lumen is moderately distended. The wall of the gall bladder is hyperechoic but is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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 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. Jejunum wall measures 0.28 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.

Other

There is a hyperechoic, ovoid structure measuring 1.2 cm x 0.89 cm cranioventral to the urinary bladder, just under the body wall. This structure appears avascular and doesn't appear intimately associated with any other structure.

ULTRASONOGRAPHIC FINDINGS

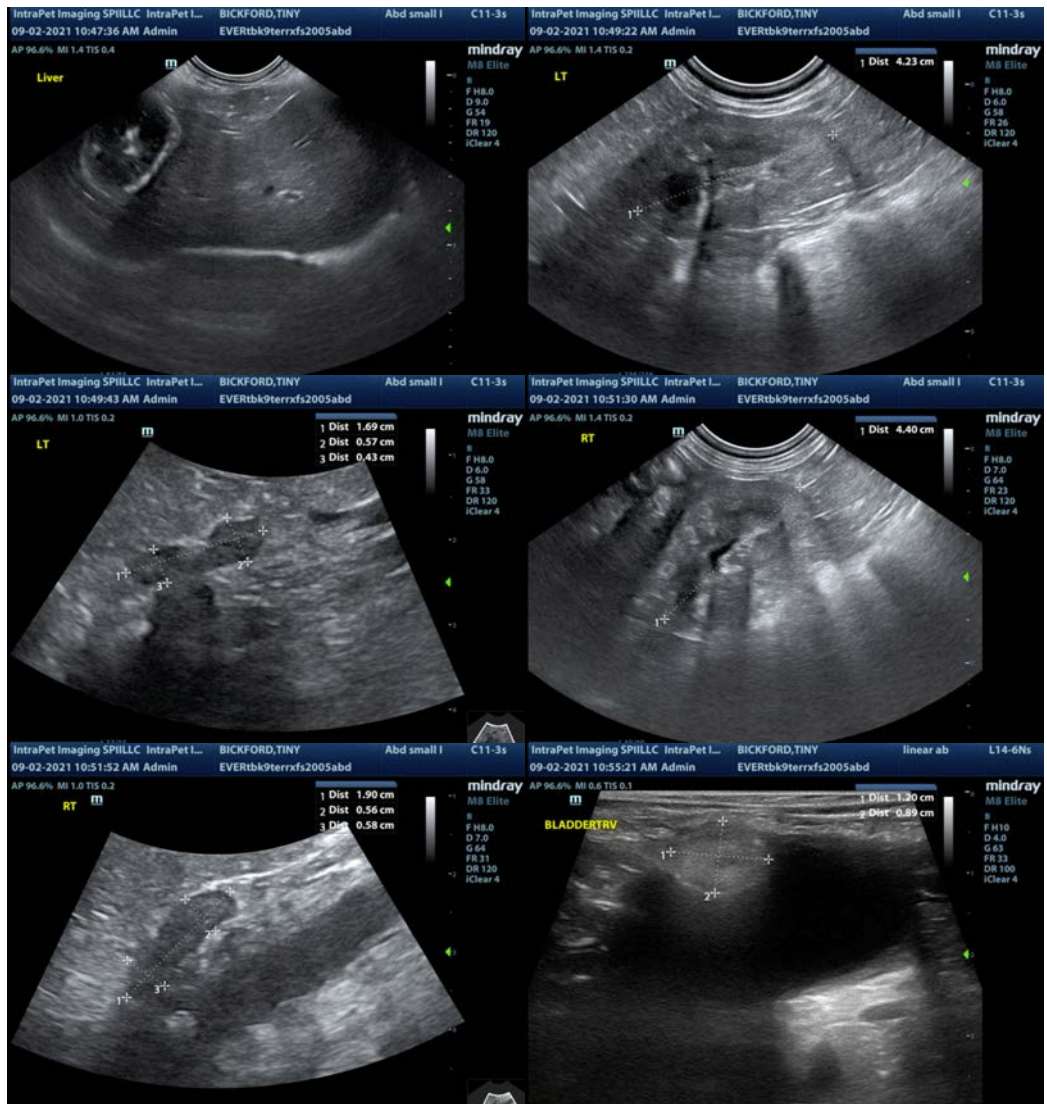
- Decreased corticomedullary distinction in both kidneys with non-obstructive nephroliths and bilateral pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the kidneys could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- 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.
- Moderate gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Hyperechoic ovoid structure cranioventral to the urinary bladder – Significance of this lesion is unclear. It appears relatively avascular, and I suspect it is benign. It appears more hyperechoic than a typical intraabdominal lipoma or lymph node. Suspect benign structure, but it should be monitored.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The kidney changes observed are most consistent with chronic progressive kidney disease. Urinalysis and culture should be performed to look for evidence of infection/pyelonephritis. If infection is present, recommend a prolonged course of antibiotic therapy based on sensitivity results (4-6 weeks). Additionally, I recommend a blood pressure evaluation and urine protein/creatinine ratio.

The liver is mildly heterogeneous. This is a non-specific finding. No focal lesions were observed. Consider liver function testing, testing for Leptospirosis, and a fine needle aspirate of the liver to help rule out round cell neoplasia. Also consider therapy with Ursodiol due to the gallbladder sludge observed, and recommend continued monitoring of the gallbladder for development of a mucocele.

The ovoid structure cranioventral to the urinary bladder is of unknown significance. It is just below the body wall, so if desired, a fine needle aspirate could be performed. Recommend continued monitoring with ultrasound, but suspect a benign structure.





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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