

**DATE PRESENTING CLINICAL SIGNS**

2/16/23

Has had a decreased appetite and more severe azotemia since a dental cleaning on 1/18/2023. At the time of the dental cleaning, the BUN and creatinine were 49/1.6. P presented for anorexia on 2/10/2023. BUN and creatinine were 105/2.6. P given combination of sc fluids and IV fluids in clinic. Values improved slightly, but appetite still decreased. Concerned that azotemia/ renal insufficiency may not be the only reason p is eating less.

PATIENT

Lefty Males

SPECIES

Canine

Current Medications: Intermittent Cerenia, Entyce, and Mirtazapine use since onset of signs on February 10. Lab Results: See attached.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

BREED

Chihuahua

Imaging Performed By: Andi Parkinson, BS, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Neutered Male

Urinary System

Urinary bladder is only mildly distended (empty). Visible contents are anechoic. Urinary bladder wall is unable to be fully assessed for pathology without further distension. No visible masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface. If there are urinary signs and/or concern for urinary bladder pathology, reassessment after complete filling is recommended.

AGE

5/31/10

WEIGHT

5.5 Pounds

The prostate area was examined without evident prostatic pathology.

INTERPRETED BYBeth Johnson, DVM
DACVIM

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of mineral or infarcts observed. The left kidney measures 3.44 cm. The right kidney measures 3.43 cm. Mild pyelectasia measuring 0.35 cm noted in the sagittal view of the right kidney.

HOSPITAL NAME

Fullerton AH

Adrenal Glands

The right adrenal gland is normal in size (1.51 cm long x 0.42 cm at the cranial pole and 0.47 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

REFERRING VET

Dr. Levine

The left adrenal gland is normal in size (1.61 cm long x 0.61 cm at the cranial pole and 0.51 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

INVOICE

45320

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

The liver is subjectively normal in size. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. In the left deep liver, the margins are particularly round, with a discrete homogeneous isoechoic, almost mass-like swelling in the left liver measuring 2.2 cm x 2.7 cm. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

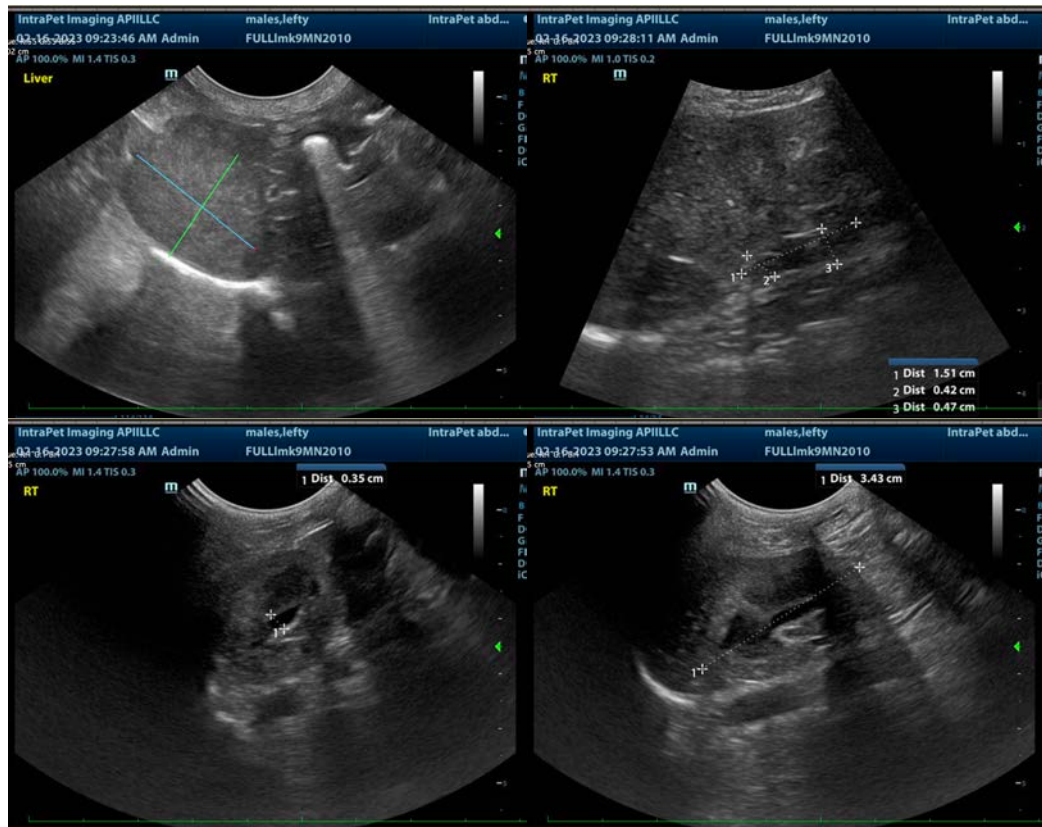
- Mild left hepatomegaly with a possible early or emerging well differentiated mass, differentials for which include nodular hyperplasia versus a marked vacuolar/endocrine hepatopathy versus infiltrative neoplastic disease, including a well differentiated primary hepatocellular neoplasia such as a hepatocellular carcinoma, round cell neoplasia, versus other. This change, however, trends in appearance toward benign.
- **Mild gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- **Age related kidney changes with mild right pyelectasia** – Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.

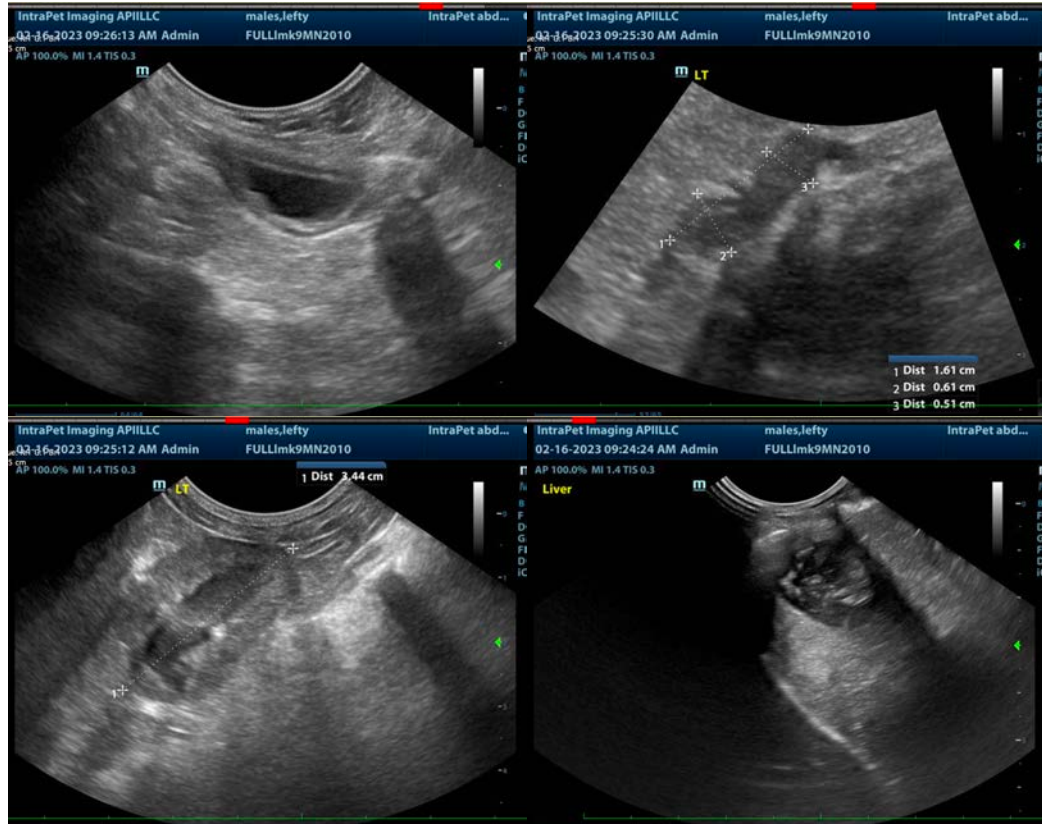
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's progressive azotemia, an acute on chronic kidney insult is suspected. Recommendations include a urine culture if not recently evaluated, as well as testing for Leptospirosis. Additionally, a baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism. The cause of the other differentials for the progression include a potential toxic insult related to anesthesia including possible hypotension or potentially post-procedure non-steroidal, etc. if applicable.

Therapeutic recommendations include continued diuresis potentially, if tolerated increased diuresis using patient's weights, etc. to assess appropriate fluid rate, as well as broad-spectrum antibiotics, hypertension and/or proteinuria management (if indicated), electrolyte monitoring and management, and control of gastrointestinal signs with antiemetics, gastroprotectants, appetite stimulants, if necessary, etc.

When the patient is stable, a fine needle aspirate of the left liver could be considered if patient's coagulation status is appropriate.





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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