

**DATE**

6/24/22

PRESENTING CLINICAL SIGNS

History: Dozer has azotemia , elevated Creat, Cocci in the urine. Had elevated Creat 1.6 in March now 3.6. I suspect pyelonephritis but may have another underlying kidney DZ, Left kidney appears abnormally shaped on rads.

PATIENT

Dozer Gaither

Current Medications: Started IV fluids 6/23 1 liter as a bolus late at night, Ampicillin, Enrofloxacin , famotidine, Cernia, all started 6/23

SPECIES

Canine

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

BREED

Border Collie Mix

Imaging Performed By: Andi Parkinson, RDMS

SEX

Neutered Male

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

AGE

10/24/13

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male.

WEIGHT

51.8 Pounds

Kidneys are bilaterally uniformly enlarged/swollen (the left kidney measures 6.53 cm, the right measures 6.63 cm) with an overall hyperechoic echogenicity and slight loss of corticomedullary definition. Normal smooth peripheral margination and shape are maintained. The renal pelvis are dilated with anechoic fluid and hyperechoic thickened pelvic fat. No overt evidence of neoplasia or mineral is observed. The perinephric area is enhanced by hyperechoic fat and mesentery. Bilateral cortical cysts were present.

INTERPRETED BYBeth Johnson, DVM
DACVIM**Adrenal Glands**

Left adrenal gland is normal in size (2.15 cm in length X 0.73 cm at cranial pole and 0.9 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

HOSPITAL NAME

Timonium AH

Right adrenal gland is normal in size (3.52 cm in length X 2.0 cm at cranial pole and 0.66 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal. A hyperechoic nodule in the cranial pole of the right adrenal gland measures 2.0 cm in diameter. There is no evidence of capsular escape or vascular invasion from the nodule.

REFERRING VET

Dr. Gernhart

Spleen

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.

INVOICE

16334

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Subjectively mild hepatic vein distention was present (consistent with reported recent fluid bullous)

Gallbladder is moderately distended with anechoic bile as well as 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 visible stomach wall is normal in thickness 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. 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 and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

- Pyelonephritis – These changes are most consistent with chronic pyelonephritis. Chronic scarring and fibrosis and/or chronic nephrolith passage can also result in these pelvic dilation changes. Early infiltrative disease cannot be ruled out but is considered less likely.
- Hyperechoic adrenal nodule in the right adrenal gland. Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Lesions greater than 2 cm are generally primary adrenal neoplasia (benign or malignant) vs hyperplasia with lesions greater than 4 cm being more predictive of malignant neoplasia. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest hyperadrenocorticism) are most often incidental and should be monitored.
- Hyperechoic hepatomegaly – This appearance is most consistent with a benign steroid (endocrine) hepatopathy or reactive or idiopathic hepatopathy. Infiltrative neoplasia such as round cell neoplasia is also possible but considered less likely.
- 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

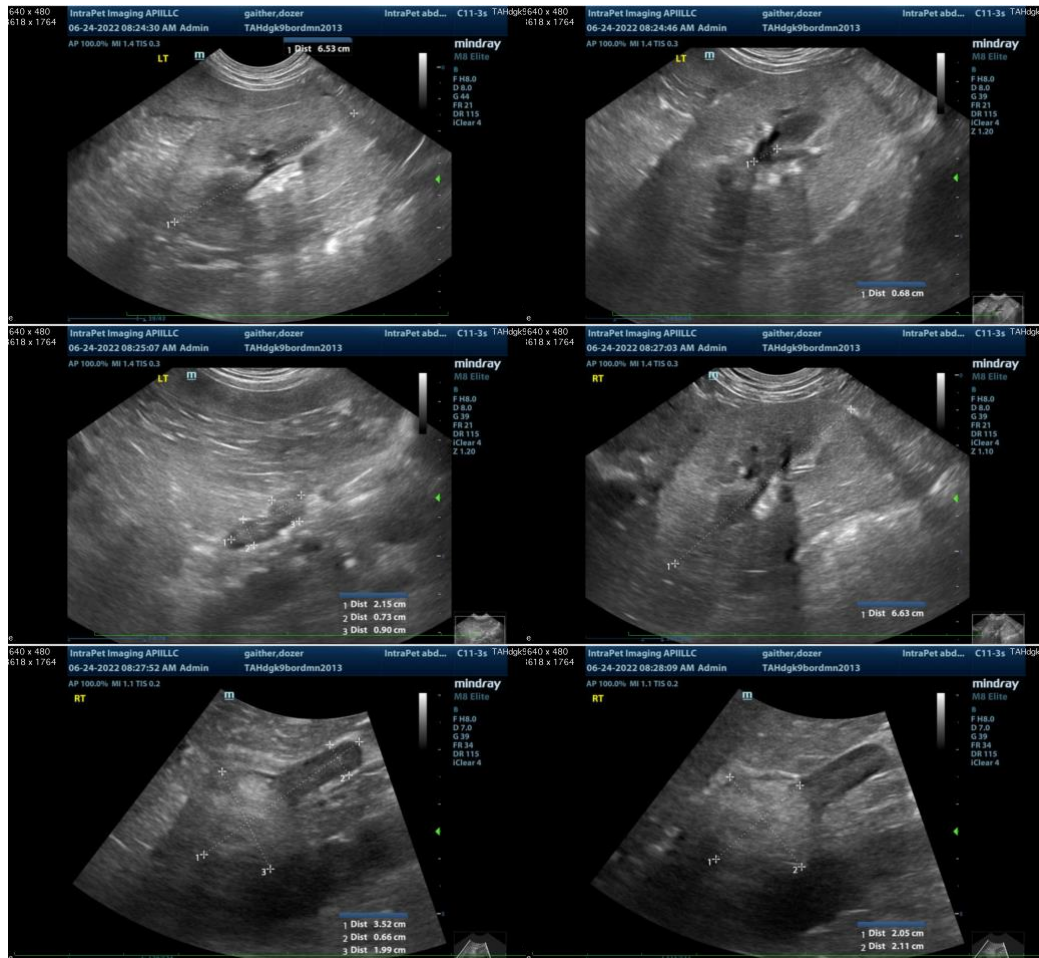
1. Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine

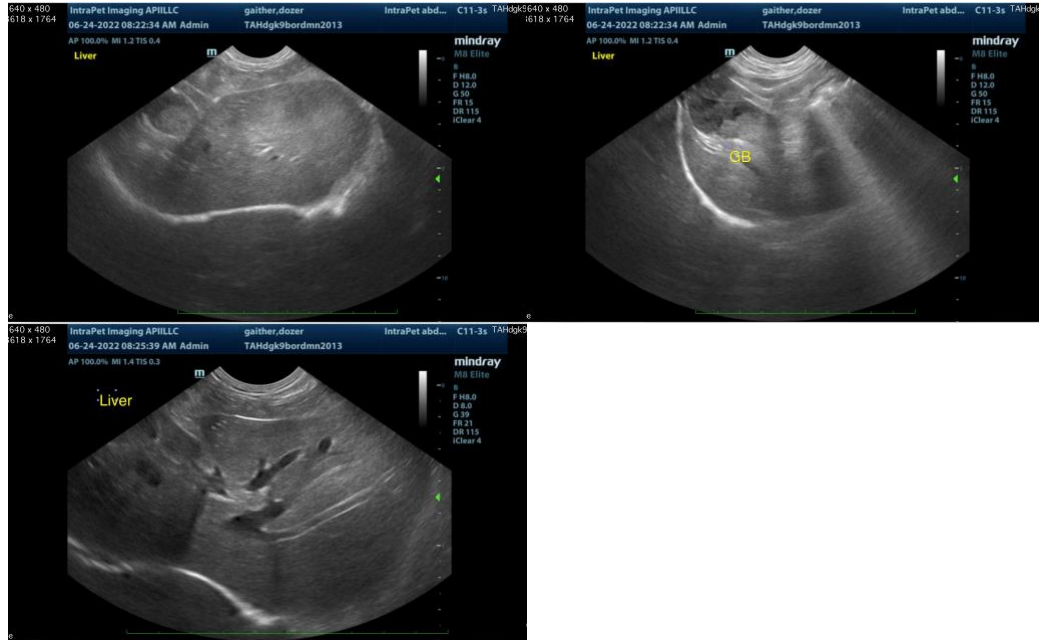
ration is recommended.

2. Blood pressure recommended, if not recently evaluated.
3. Testing for Leptospirosis is warranted, given the acute change in azotemia recently
4. The described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism. If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc. are present, testing for hyperadrenocorticism with a LDDS test is warranted.

In the meantime, continued medical management (as is already being reported) of suspect pyelonephritis and acute on chronic azotemia, with diuresis, broad-spectrum antibiotics and supportive care of clinical signs, etc. is recommended.

Given the mild subjective hepatic vein dilation, consistent with recent fluid bullous potentially, however, if a heart murmur is noted and/or other clinical concerns for cardiac disease, thoracic radiographs and/or an echo should be considered as well.





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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