



PATIENT

King Warnock

SPECIES

Canine

BREED

Shih Tzu X

SEX

Neutered Male

AGE

8 Years

WEIGHT

19 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Whippany Vet Hospital

REFERRING VET

Dr. Cordero

INVOICE

37023

DATE

4/20/22

PRESENTING CLINICAL SIGNS

Vomiting for months-becoming more regular, mostly bile but occ. food. Blood in urine intermittently. Chronic eye ulcers. Current meds: Prilosec 10mg sid, Apoquel (only since 4/16), Eye meds: Atropine, Cyclosporine, Ofloxacin

Abnormal PE/Chem/CBC/UA Results: 1/22/22- ALP 356, GGT 20, Ca 11.6, Chol 464, Trig 1066. U/A 12/27/21- PH 5.5, WBC 2-3, RBC 2-3, USG 1.-14. Cysto performed today.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall appears diffusely mildly irregular. There is an accumulation of dependent shadowing, hyperechoic material, most consistent with sandy debris and stones in the dependent portion of the urinary bladder.

The prostate is normal in size (1.02 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.28 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.29 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.62 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 0.55 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. There is a small, hypoechoic nodule visualized within the parenchyma measuring 0.4 cm x 0.54 cm.

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 gallbladder 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.



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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.

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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.)

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Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

SEX

Neutered Male

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

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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

WEIGHT

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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

A brief view of the heart was submitted. No significant pericardial effusion was seen.

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ULTRASONOGRAPHIC FINDINGS

- Dependent mineralized debris in the urinary bladder – findings are most consistent with sandy debris and stones.
- Small, hypoechoic nodule within the splenic parenchyma – There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- 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.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There are numerous small stones and sandy debris visualized in the urinary bladder. Correlate with abdominal radiographs, urinalysis and culture. It is likely that cystotomy will be indicated.

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There is a small, hypoechoic nodule visualized within the splenic parenchyma. This trends towards a more benign appearance, as it does not deviate the splenic capsule. A fine needle aspirate can be considered.

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No focal lesions are visualized associated with the liver or biliary tract. The heterogeneous change is non-specific and relatively mild. You could consider a liver function test and fine needle aspirate to rule out a more significant disease process.

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It is likely that the reported vomiting is not associated with either the stones or the liver changes reported. No obvious gastrointestinal lesions are visualized, but there are many causes for vomiting that cannot be diagnosed by ultrasound alone. If this is thought unlikely to be associated with the stones or the liver, then consider primary GI causes such as food allergy/dietary intolerance, dietary indiscretion, pancreatitis, GI parasites, IBD, and less likely intestinal neoplasia. You could consider a diet trial with a novel protein/hydrolyzed protein prescription diet, and treatment for acute enteritis. If symptoms persist, GI biopsies may be indicated. You could consider obtaining liver and GI biopsies at the time of cystotomy.

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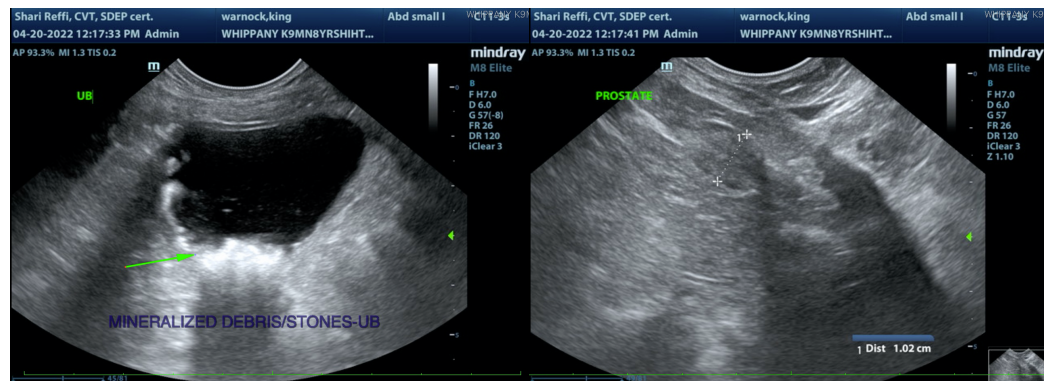
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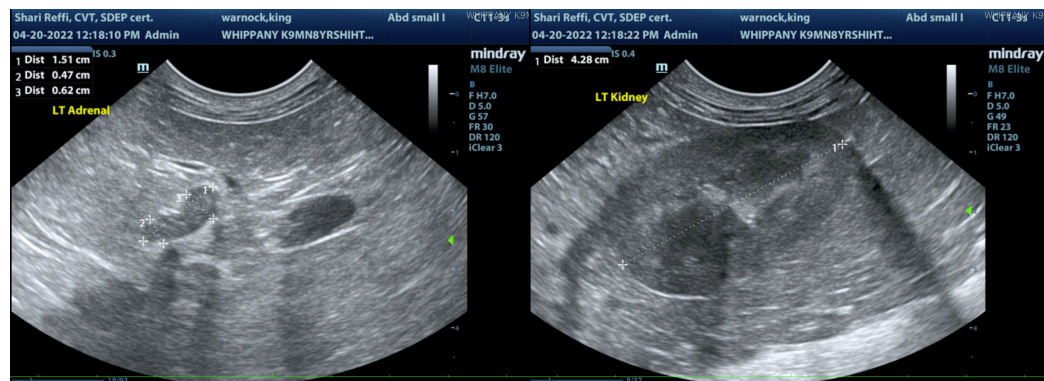
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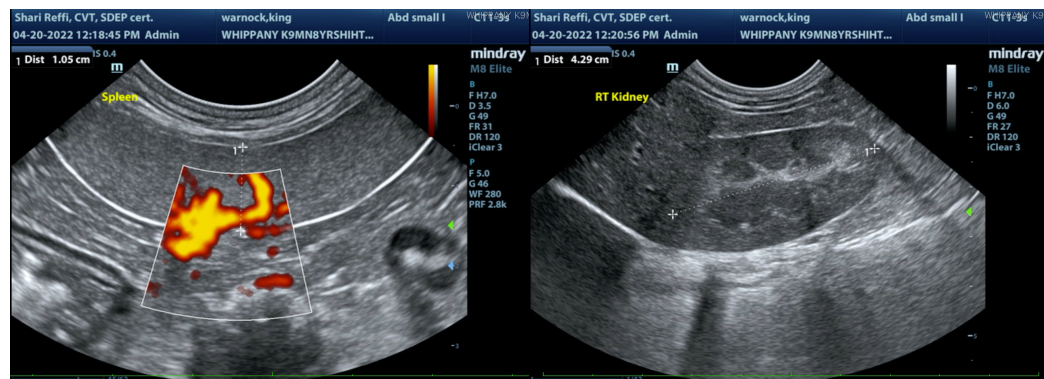


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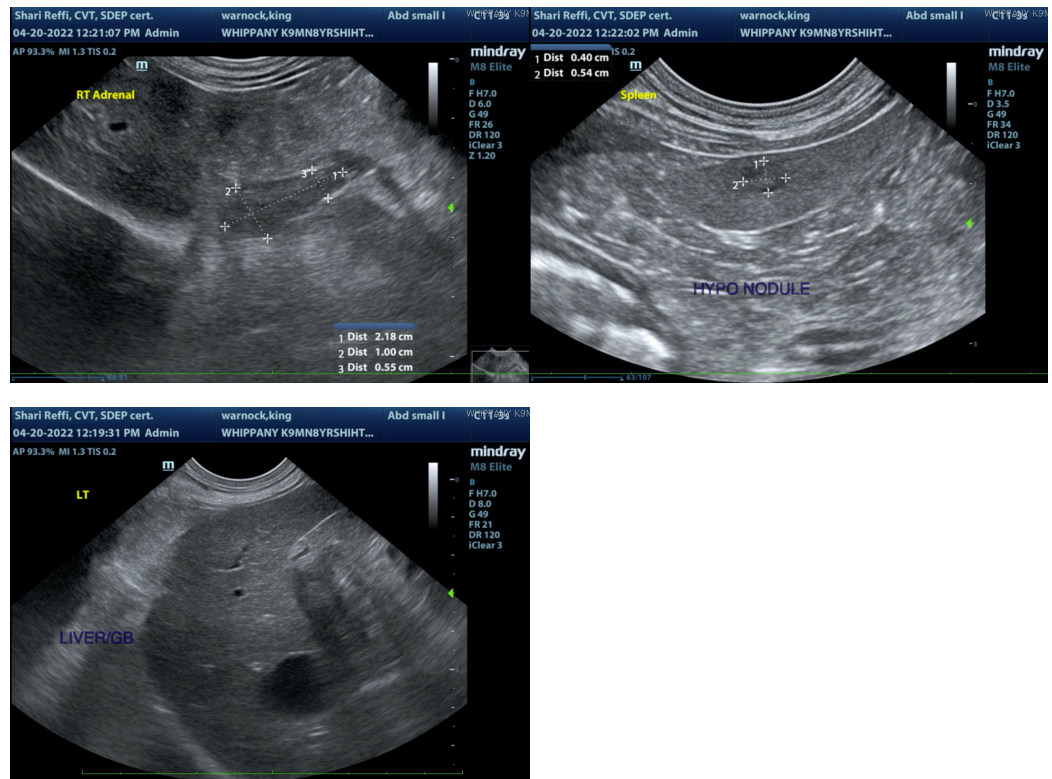
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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