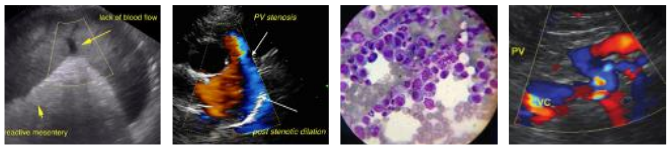
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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1-800-838-4268 info@sonopath.com

PATIENT
Coco Golden

SPECIES
Canine

BREED
Shih Tzu

SEX
Spayed Female

AGE
16 Years

WEIGHT
5.7 kg

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Erin Wicks

HOSPITAL NAME
Shores VEC

REFERRING VET
Dr. Miller

INVOICE
37836

DATE
5/21/22

PRESENTING CLINICAL SIGNS

Presented at our hospital for AUS. Started last Wednesday with vomiting, got better and then worse again, NE, saw rdvm on Tuesday. Rdvm did bloodwork, liver values were really high, annual bloodwork in Dec was normal. Rec AUS. Rdvm closed, unable to request records. Previous Health Concerns: seizures for 10yr (controlled with meds) Current Medications: Cerenia, Clavacillin, Metronidazole, Denamarin, Zonisamide, Mirtazapine Appetite/When did they eat last: small amt last night Abnormal PE/Chem/CBC/UA Results: Rdvm bloodwork: elevated liver values

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Non-obstructive medullary mineral noted in both kidneys.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 2.1 cm length x 0.59 cm at the caudal pole. A subtly expansive, non-homogeneous, hyperechoic, non-mineralized nodule was noted in the mid to cranial right adrenal gland. The nodule measured 1.0 cm x 0.90 cm. The overall right adrenal gland measured 2.2 cm length x 0.52 cm at the caudal pole. No overt evidence of vascular invasion associated with the right adrenal gland.

Spleen

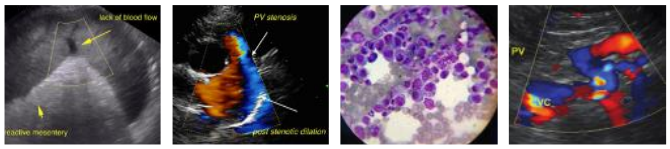
The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver

The liver exhibited normal size to potential mild generalized enlargement. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was mildly distended, yet no evidence post-hepatic obstruction. Anechoic content present with moderate non-dependent yet non-organized echogenic sludge. No overt evidence of peripheral gallbladder inflammation.

Gastrointestinal

The stomach exhibited intact yet regionally prominent wall layering, subjectively in the area of the antrum and pylorus. The stomach was moderately distended with retained anechoic to echogenic fluid



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along with minor focally shadowing chyme and ingesta. No overt evidence of mechanical pyloric outflow obstruction. Pylorus wall measured 0.65 cm.

The small intestine presented intact wall layering with primarily maintained 1:3 muscularis/mucosa ratio. Segmental propensity for potential mildly prominent small intestinal mucosa. Duodenum wall measured 0.50 cm. Jejunum wall measured 0.36 cm. No evidence of small intestinal mechanical/metabolic ileus.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The area of the pancreas base and right pancreatic limb presented hypoechoic to heterogeneous echogenicity compared to adjacent omental fat. Mild asymmetrical capsule margination was present with mild variable parenchymal swelling and mild peripancreatic inflammation. No overt evidence of neoplasia.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Moderate chronic renal changes with non-obstructive medullary mineral.
- Non-specific right adrenal nodule – suspect adenoma, potential for emerging neoplasia (i.e., pheochromocytoma, adenocarcinoma, or other).
- Hepatopathy – metabolic, vacuolar, reactive hepatopathy, inflammatory hepatopathy, hepatotoxic insult or other hepatopathy possible. Infiltrative neoplasia is considered a less likely differential diagnosis.
- Moderate gallbladder debris – possible mild cholecystitis.
- Hypomotile stomach exhibiting intact yet regionally prominent wall layering – suspect hypomotile gastritis, potential for early infiltrative neoplasia possible.
- Overtly normal small bowel.
- Possible low-grade pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Screening blood pressure recommended to assess for evidence of hypertension, which may allude to a pheochromocytoma. Full adrenal workup recommended, if clinically indicated. Sonographic monitoring of the right adrenal nodule for evidence of progression recommended.

Assuming normal clotting status, hepatic FNA for screening cytology +/- Leptospirosis titers/PCR (if potential exposure) suggested. Symptomatic therapy for potential hepatitis/pancreatitis including hepatosupportive medications, antibiotics if clinically indicated, and as needed gastrointestinal support would be reasonable. Recheck sonogram for gastric wall and pancreatic reassessment if persistent/progressive clinical signs despite conservative therapy. Correlation with lab work recommended.

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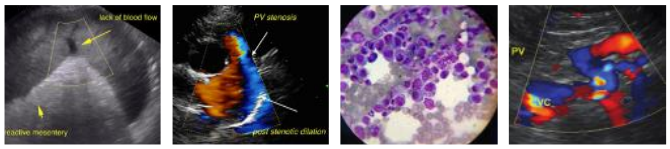

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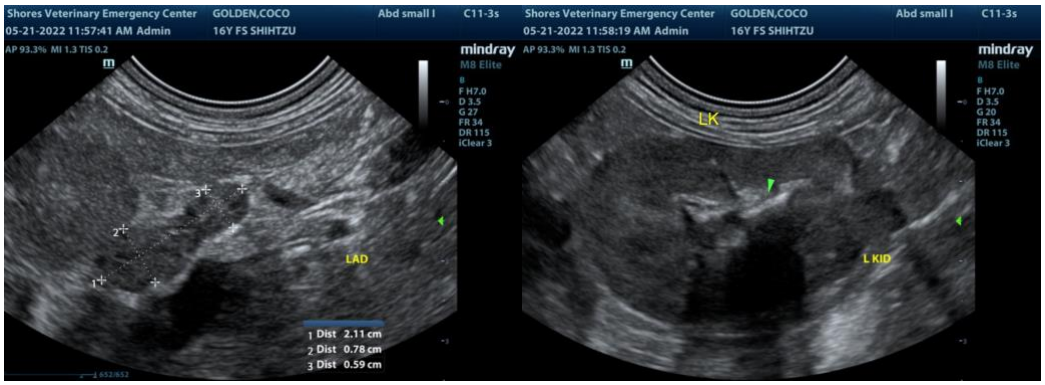

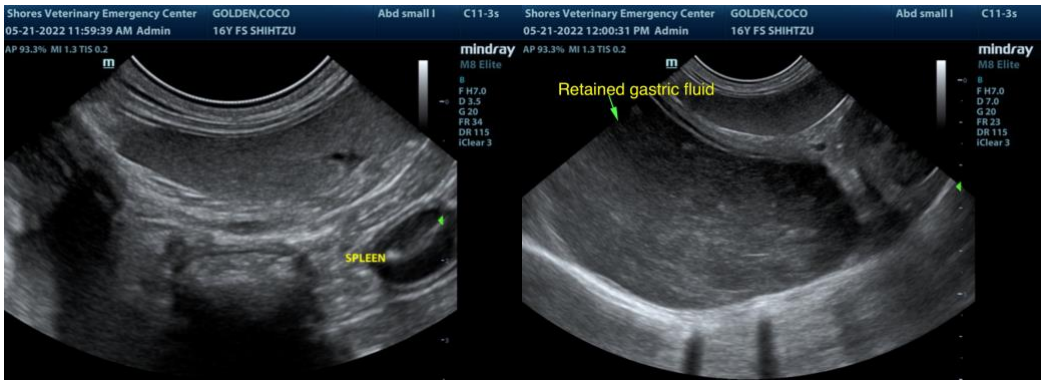

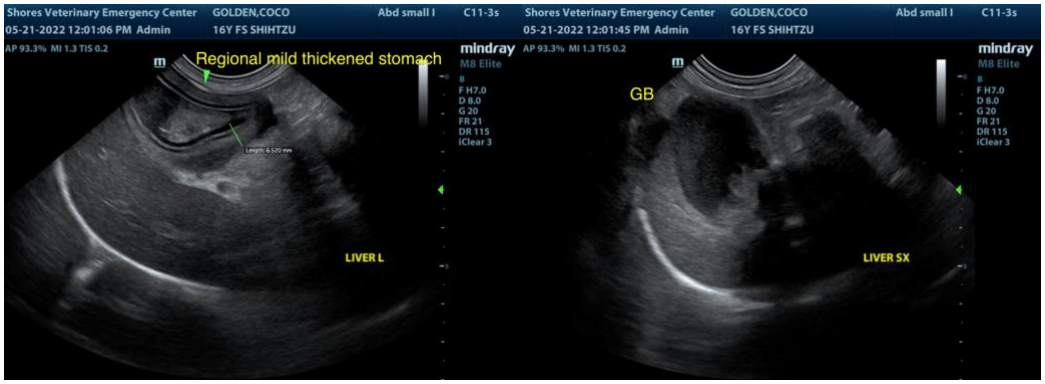

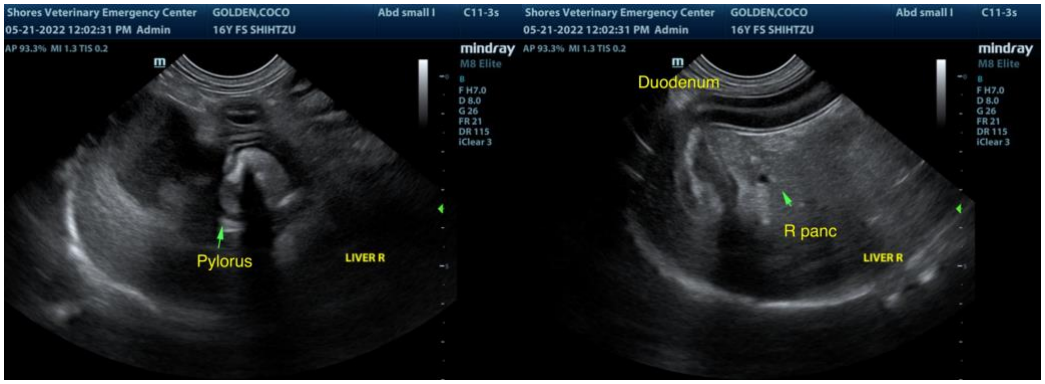

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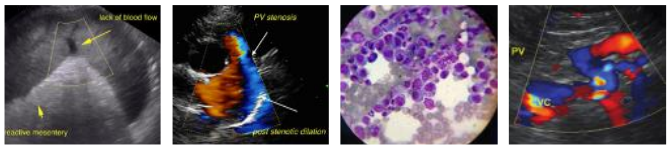

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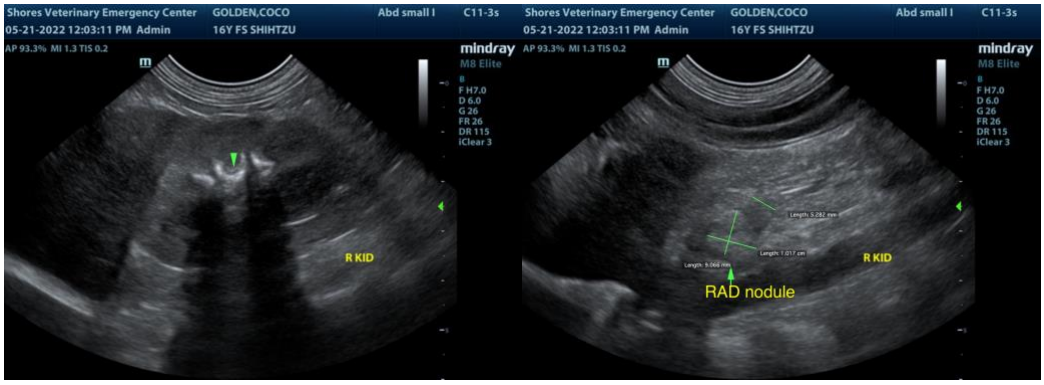

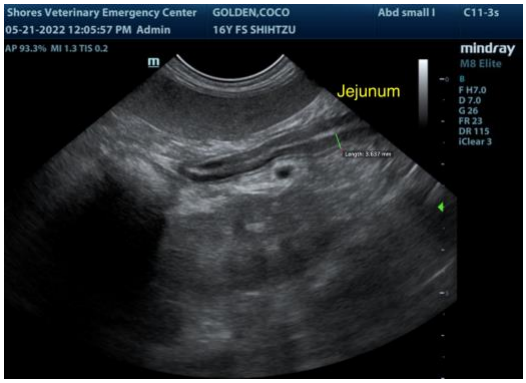

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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