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Clinical Sonography & Telecytology
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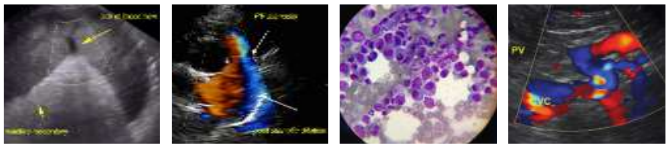


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Lenny Crumbaugh

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

MN

AGE

13 years

WEIGHT

9.3 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Focused Ultrasound Resources

HOSPITAL NAME

Focused Ultrasound Resources

REFERRING VET

Dugan's VH

INVOICE

12669

DATE

11/26/21

PRESENTING CLINICAL SIGNS

Recurrent pancreatitis Blood in stool TX: Amoxi, fortiflora, metronidazole
Abnormal PE/Chem/CBC/UA Results: CPL - Abnormal BUN - 43 ALT - 134 ALP - 384 Urine conc - 1040 Clostridium

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal tone. Mild nonuniform thickening of the apical urinary bladder wall was present. Hyperechoic focal echogenicities with distal acoustic shadowing were present in the dependent lumen. An example of a calculus measured 0.8 cm diameter. Focal areas of likely adhered mineral were noted along the ventral luminal surface. The urethra was normal in thickness and tone to a depth of 2.0 cm.

No overt pathology was noted in the area of the residual prostate.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were 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 mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. A moderately sized cranial thinly walled cyst containing anechoic fluid was present in the left kidney, measuring 2.2 cm in diameter. Areas of nonobstructive medullary mineral were present in the right kidney. No evidence of pelvic dilation was present. The left kidney measured 3.4 cm in length. The right kidney measured 3.9 cm in length.

Adrenal Glands

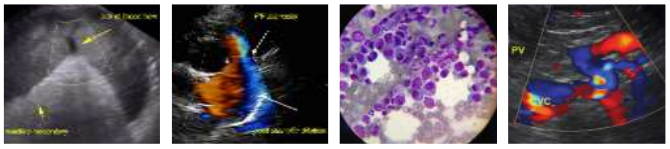
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.58 cm width at the caudal pole and 0.5 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.44 cm width at the caudal pole and 0.4 cm width at the cranial pole.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

Liver/ Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. Intermittent, non-expansive, subtly hypoechoic to nonhomogeneous intraparenchymal nodules were present. An example measured 2.2 cm in diameter.



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The gallbladder was non-distended in size with mild congealed gallbladder debris. No evidence of gallbladder or peripheral inflammation was noted. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate, echogenic ingesta with subtle progressive distal acoustic shadowing.

The small intestine presented intact wall layering and primarily maintained 1:3 muscularis/mucosa ratio with mild duodenojejunal mucosal speckling.

The visualized colon was sonographically unremarkable with subjective semi-formed to soft feces.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Urinary bladder calculi with mild concurrent cystitis
- Bilateral chronic renal changes with left kidney cyst and nonobstructive right kidney medullary mineral
- Chronic hepatopathy with generalized parenchymal remodeling and intermittent subtly hypoechoic intraparenchymal nodules
- Heterogeneous pancreas - potential for low-grade or chronic pancreatitis
- Enterocolitis with gastric ingesta

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient may be passing small amounts of mineral from the kidneys into the urinary bladder. Urine C/S on a sterile urine sample is recommended.

The presentation of the liver may indicate vacuolar hepatitis, chronic active hepatitis, cholangiohepatitis, early fibrosis / cirrhosis or other hepatopathy. The nonspecific nodules are suggestive of areas of hematopoiesis or nodular / regenerative hyperplasia. Potential for parenchymal or nodular neoplasia is considered a less likely differential diagnosis, yet cannot be definitively excluded.

Assuming normal clotting status, ultrasound-guided hepatic parenchymal and nodule FNA, using a 25-gauge needle, is warranted for further clarification. Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial.

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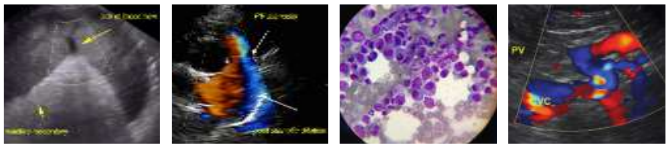

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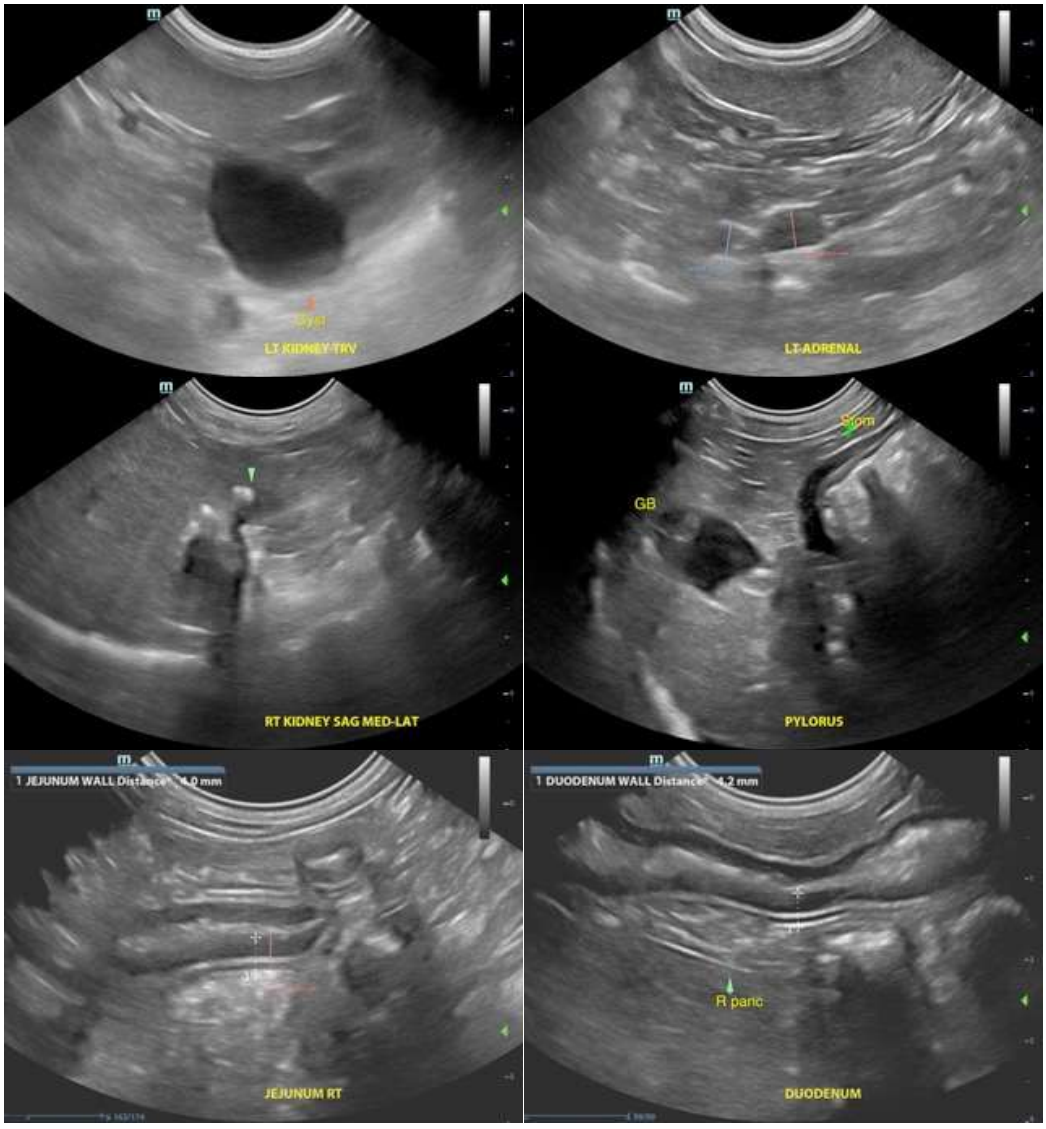
The appearance of the pancreas was not consistent with current active pancreatitis and without evidence of pancreatic neoplastic criteria.

The gastric Ingesta may suggest recent meal ingestion of post prandial presentation. However, if documented NPO, the potential for some degree of gastric stasis may be possible. If recurrent or historical gastrointestinal signs, potential for more chronic inflammatory enterocolonopathy such as IBD or similar may be possible. Continued supportive care for enterocolitis, which may include in addition to current therapy, limited antigen, hydrolyzed or bland diet with potential long-term dietary therapy.



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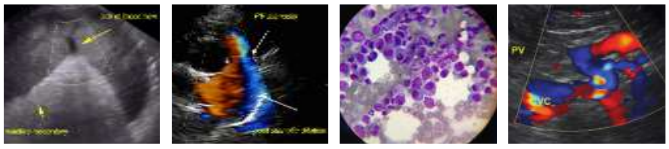

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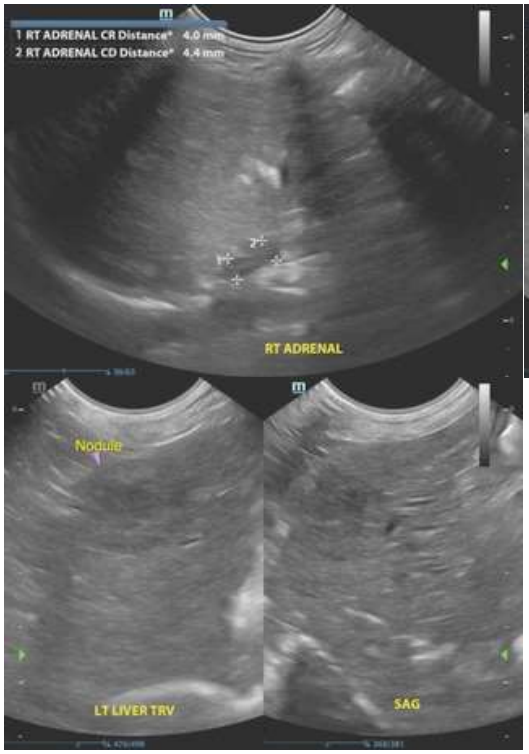

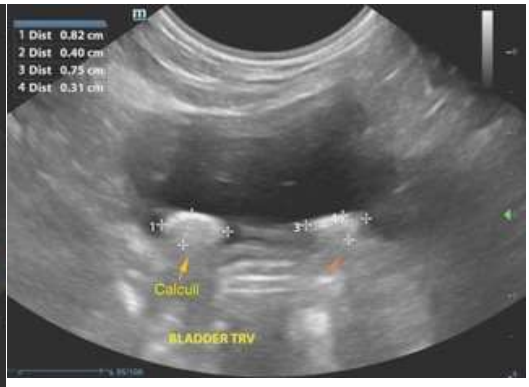

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com