



PATIENT

Runt Lovvom

SPECIES

Canine

BREED

Chihuahua Mix

SEX

MN

AGE

12.6yr

WEIGHT

14.5lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Carter

HOSPITAL NAME

Willamette Veterinary
Hospital

REFERRING VET

Periwinkle Vet
Hospital

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DATE

10/20/2022

PRESENTING CLINICAL SIGNS

Seizure history. On phenobarbital. June 2022; suspected pancreatitis; treated with cefpodoximen, cerenia, meloxicam. Oct 2022; Cerenia, oxycodone, amoxi , denamarin

Abnormal PE/Chem/CBC/UA Results: phenobarb blood levels have been within therapeutic ranges Jan 2022; ALP 352 June 2022, ALP 958 Oct 2022; ALP 1730, ALT 789, globulin 5.1, T4 <1.0, neutrophils 18,260

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 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 mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Pinpoint areas of medullary mineral were present. The left kidney measured 4.0 cm in length. The right kidney measured 4.0 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.38 cm width at the caudal pole and 1.5 cm width at the cranial pole. The right adrenal gland was not definitively visualized.

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

The liver was mildly enlarged with subjectively normal structure, and contour. Mild increased parenchyma echogenicity with a mild to moderate coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was mildly distended in size with mildly prominent to hyperechoic walls and primarily anechoic luminal content with moderate non-dependent inspissated to mildly organized variably hyperechoic luminal debris. Evidence of mild peripheral hyperechoic mesentery was present along with scant free fluid. The cystic and common bile ducts were normal.

Gastrointestinal



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The stomach presented intact yet mildly prominent wall layering in the area of the antrum and pylorus. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material. The pyloric wall measured 0.60 cm in width.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

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

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Pancreas

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

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Free Abdomen

A small pocket of scant pericholecystic free fluid present around the gallbladder.

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ULTRASONOGRAPHIC FINDINGS

- Gallbladder mucocele with evidence of peripheral inflammation and scant pericholecystic free fluid
- Hypoechoic to prominent pancreas base-potential concurrent persistent pancreatitis
- Suspect mild pyloric gastritis
- Hepatopathy

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Secondary

- Mild chronic renal changes

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This is a potentially complicated case; the gallbladder presentation may suggest possible bile leakage and potential for secondary emerging regional bile peritonitis. Potential for persistent or recurrent pancreatitis is a complicating or contributing factor to the clinical presentation is likewise of concern. Potential for pancreatitis or emerging pyloric mural neoplastic criteria considered a less likely differential. Subjectively the liver appears to be benign with considerations including metabolic/vacuolar hepatopathy, primary or secondary inflammatory disease with some contribution to the chronic hepatic enzyme levels likely secondary to phenobarbital administration.

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Clotting status evaluation recommended. Assuming normal clotting status and with broad spectrum perioperative antibiotics, laparotomy with cholecystectomy, gross inspection of the pancreas and pylorus +/- hepatic biopsies would be warranted. Some or all of the following empirically with close monitoring however a guarded prognosis is indicated.

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Enrofloxacin 5 mg/kg SID PO & Metronidazole (10-20 mg/kg po bid) over 3 weeks, Ursodiol (10-15 mg/kg p.o. q24h) over 8 weeks and recheck sonogram. Monitor rapid rise in ALT, SAP, Bilirubin, bilirubinuria, leukocytosis, focal cranial abdominal subxiphoid discomfort or progressive anorexia.

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More information regarding clinical emerging mucocele issues may be found with our article and research at <http://sonopath.com/resources/articles>, Defining a GB Mucocele and Clinical Parameters in Dogs with Sonographically Diagnosed Surgical Biliary Disease from ECVIM 2009.

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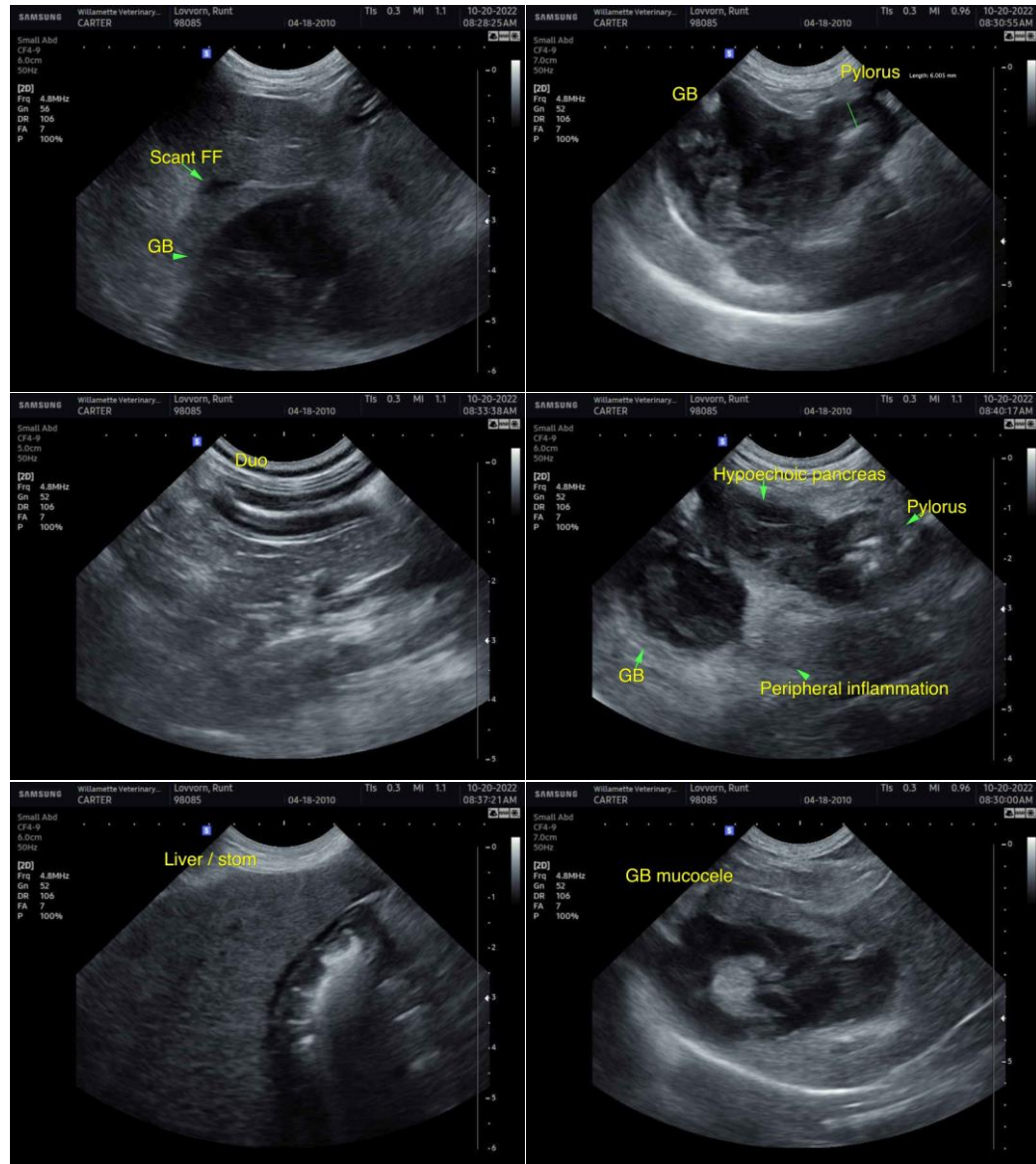
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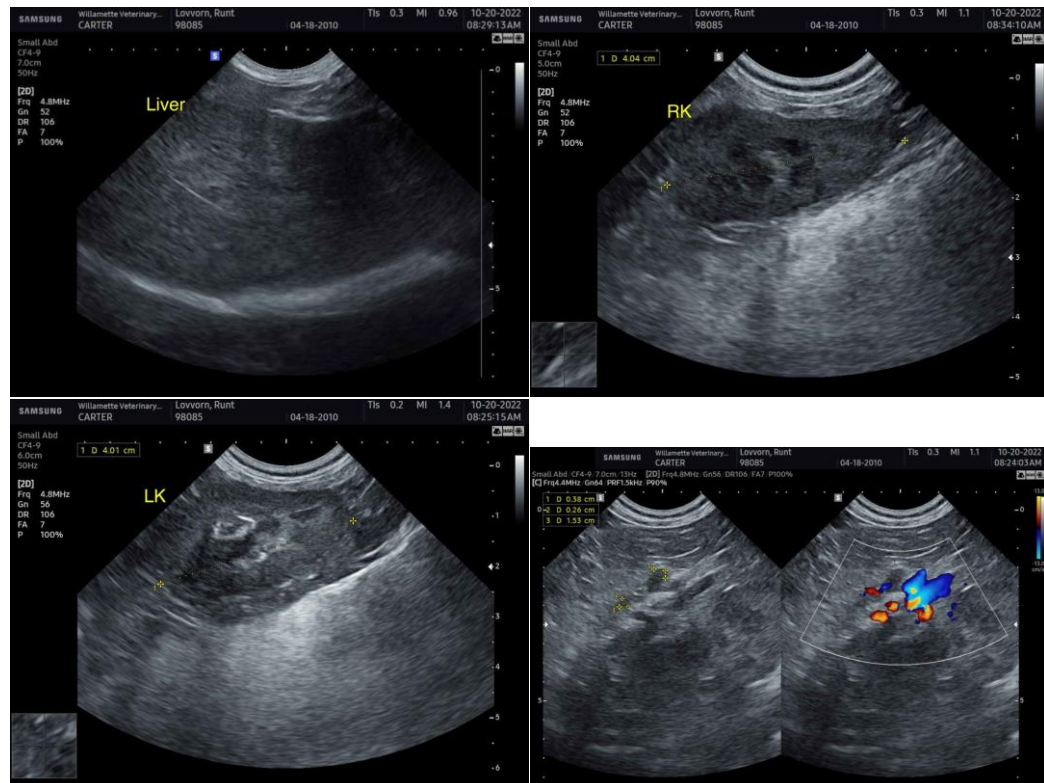
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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

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