



PATIENT

Rocco Alpert

SPECIES

Canine

BREED

Chihuahua

SEX

MN

AGE

10 years

WEIGHT

11 lbs.

PRESENTING CLINICAL SIGNS

Weight loss, vomiting, lethargy, diabetic. Current meds: Novolin N 1 unit BID, Cerenia, Enrofloxacin, cefazolin.

Abnormal PE/Chem/CBC/UA Results: ALP 1028, ALT 967, T. bili 1.2, glucose 355, NA 131. U/A: glucose 1028, PRO 30, BLD 10, USG 1.034.

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 was noted.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture measuring 0.9 cm in diameter. Mild dilation of the prostatic, which is nonspecific and likely a patient variant, was present.

The area of the aortic trifurcation was free of pathology.

INTERPRETED BY

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

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 4.5 cm in length. The right kidney measured 4.5 cm in length.

IMAGING PERFORMED BY

Kelly Vazquez

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 1.7 cm length x 0.50 cm width at the caudal pole. The right adrenal gland measured 1.4 cm length x 0.46 cm width at the caudal pole. No evidence of adrenomegaly or adrenal tumors was evident.

HOSPITAL NAME

Glen Rock VH

Spleen

REFERRING VET

Dr. Scott Stekler

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.

INVOICE

15008

DATE

9-28-22

Liver/ Gallbladder

The liver exhibited subjective mild enlargement with normal 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. Focal to intermittent discrete hyperechoic



PATIENT	intraparenchymal nodules were noted. An example measured 1.1 cm in diameter. The hepatic and portal vasculature were normal in appearance without signs of congestion.
Rocco Alpert	
SPECIES	The gallbladder was mildly distended in size with subtly prominent to echogenic gallbladder walls. The gallbladder was filled with non-dependent, variably hyperechoic, organized debris exhibiting discrete to emerging stellate pattern with areas of suspected concurrent hypoechoic mucus. Evidence of mild peripheral gallbladder inflammation exhibited by mild pericholecystic hyperechoic omentum was noted.
Canine	The cystic and common bile ducts were normal.
BREED	
Chihuahua	<i>Gastrointestinal</i>
SEX	The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. Mild gastric distension with mild retained primarily nonshadowing ingesta/ chyme was present.
MN	
AGE	The duodenum exhibited intact yet mildly prominent wall layering with subjective minor duodenal ileus. The jejunum and ileum to the level of the colon exhibited intact wall layering with maintained 1:3 muscularis / mucosa ratio. No evidence of jejunal ileal mechanical / metabolic ileus.
10 years	
WEIGHT	Normal visible colon wall layers were present with apparent formed feces in lumen.
11 lbs.	<i>Pancreas</i>
INTERPRETED BY	The left limb, right limb, and 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.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	
IMAGING PERFORMED BY	<i>Free Abdomen</i>
Kelly Vazquez	No evidence of pericholecystic free fluid was present. No omental lymphadenopathy was present.
HOSPITAL NAME	ULTRASONOGRAPHIC FINDINGS
Glen Rock VH	<i>Primary Findings</i>
REFERRING VET	<ul style="list-style-type: none"> • Gallbladder mucocele with evidence of mild pericholecystic inflammation • Hepatopathy exhibiting nonuniform parenchyma including intermittent discrete hyperechoic intraparenchymal nodules - although nonspecific, the nodules are suggestive of areas of hyperplasia or lipogranulomas • Mild active to chronic active pancreatitis pattern • Gastroduodenitis
Dr. Scott Stekler	
INVOICE	<i>Secondary Findings</i>
15008	<ul style="list-style-type: none"> • Mild chronic renal changes
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

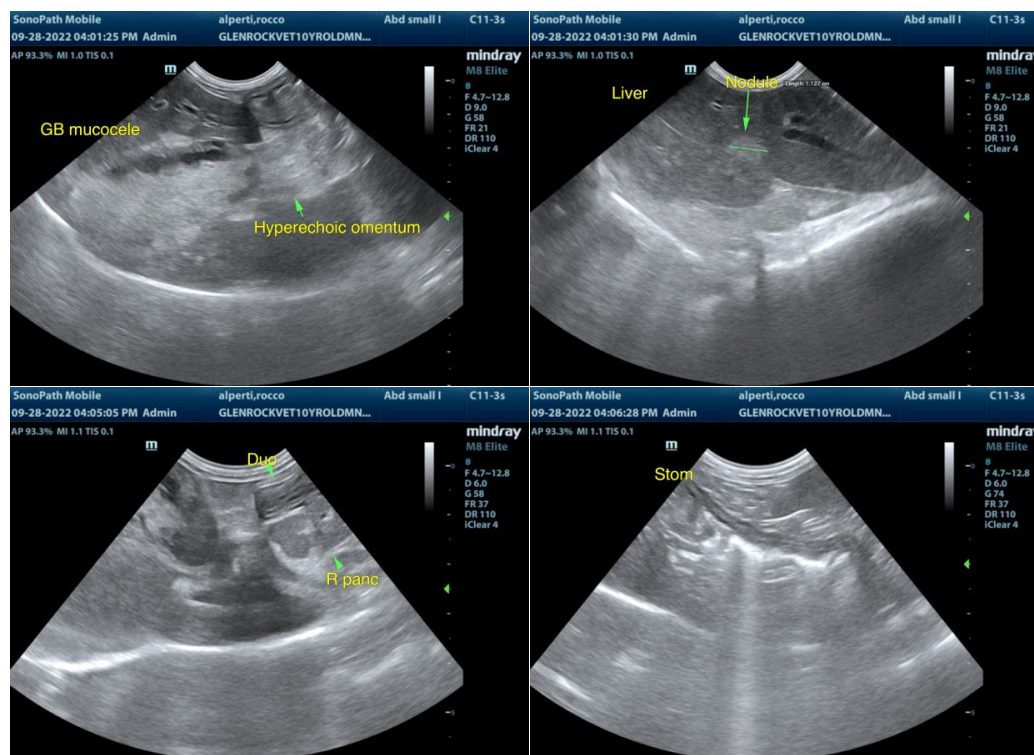
Complicated case with potential multifactorial component to the patient's clinical signs with contributing factors secondary to the gallbladder mucocele, primary vs. secondary hepatopathy, pancreatitis, with potential for primary or secondary gastroenteropathy, all potentials. Even without reported cranial abdominal / subxiphoid abdominal pain, evidence of peripheral gallbladder inflammation in the face of gallbladder mucocele may indicate that cholecystectomy should be strongly considered in this patient, as medical therapy for the gallbladder mucocele may not be rewarding.

Assuming normal diabetic control, hepato-gastrointestinal support with empirical therapy for subjective mild pancreatitis with close monitoring of hepatic enzyme elevations or for evidence of increasing cholestasis would be reasonable. Urine C/S on a sterile urine sample is recommended, given the evidence of glucosuria. A GI panel to include PLI/TLI/Cobalamin/Folate is warranted for further assessment of the pancreas, as well as assessment for possible underlying primary intestinal disease as a contributing factor to the weight loss.

Given multiple comorbidities in this patient, a referral may be considered.

Cholecystitis Gallbladder Mucocele protocol.

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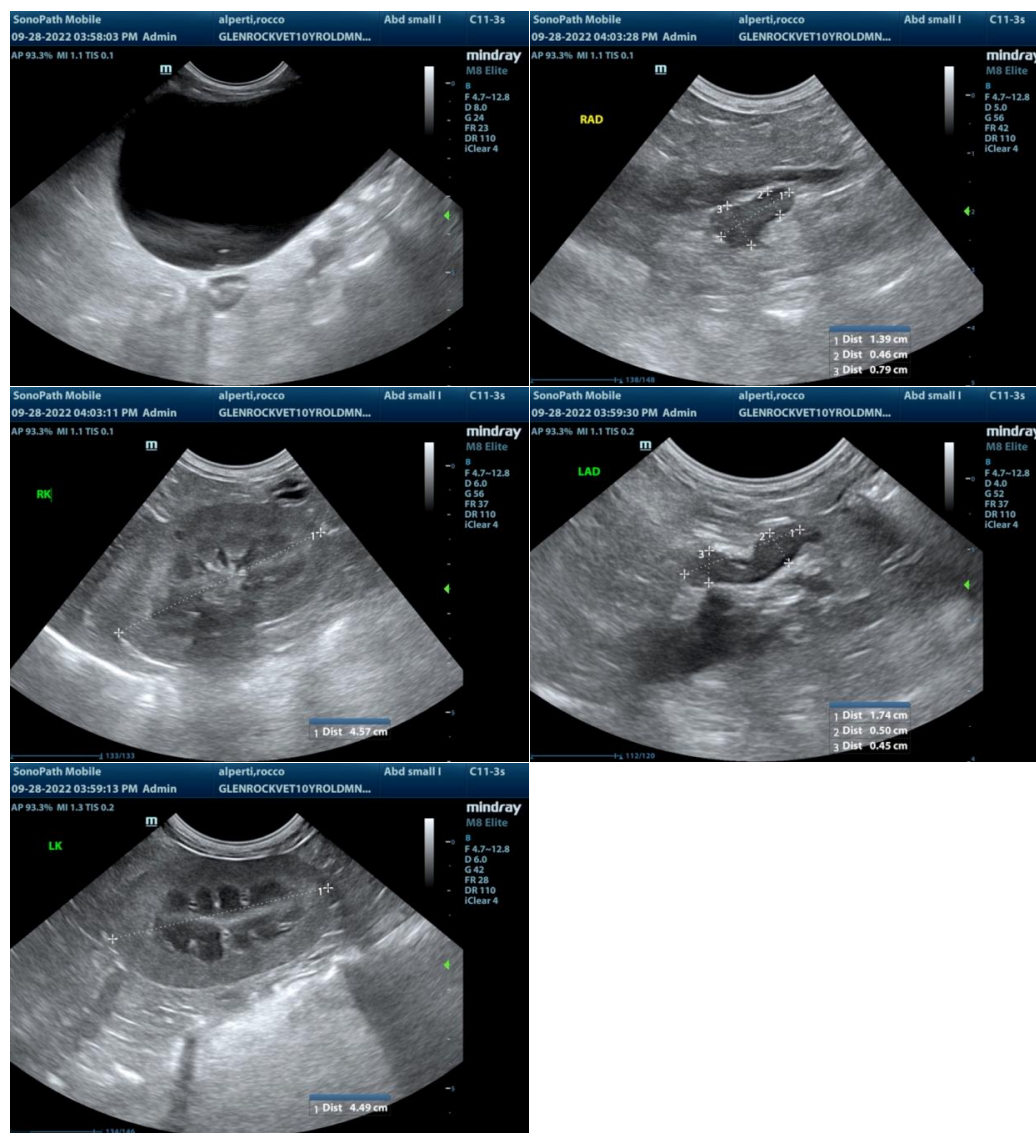
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
info@SonoPath.com