**PATIENT**

Mitzie Hall

SPECIES

Canine

BREED

Bichon

SEX

Spayed Female

AGE

12 Years

WEIGHT

15 Pounds

INTERPRETED BYR. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)**IMAGING PERFORMED BY**

Rachel Runnells, RVT

HOSPITAL NAME

SVS Imaging KC

REFERRING VET

Dr. Michelle Hall

INVOICE

35372

DATE

2/1/22

PRESENTING CLINICAL SIGNS

P has previous history of diabetes (regulated) and pancreatitis. Approx. 4 weeks ago p vomited and quit eating. BW was ran and all liver values were elevated so took p to specialist for u/s. They found an enlarged gall bladder at that time. It was rec we do removal. Since then p was put on ursodiol 250 mg 1/4 tab SID and prednisone 5 mg SID. P has actually done very well.

Abnormal PE/Chem/CBC/UA Results: Since the first bw was ran, another panel was ran 2 days ago. Liver values have elevated more, however bilirubin has decreased slightly. So the most recent bw had decreased Na, elevated K, ALT AST ALP GGT all elevated and t bilirubin at 0.80. Cholesterol at 893.

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 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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The right kidney measured 5.1 cm. The left kidney measured 4.8 cm.

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 0.45 cm at the cranial pole and 0.45 cm at the caudal pole. The right adrenal gland measured 0.74 cm at the cranial pole and 0.43 cm at the caudal pole.

The right adrenal gland exhibited potential for indistinct nodular changes in the cranial pole. This is suspected to be potential folding of the cranial right adrenal gland or possible adenomatous change. No overt evidence of neoplastic criteria, which is considered unlikely.

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

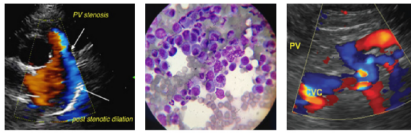
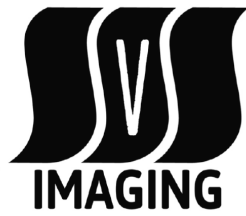
The liver exhibited mild generalized enlargement with maintained symmetrical capsule contour. Non-uniform increased hepatic parenchyma echogenicity was noted, exhibiting parenchymal remodeling. The gallbladder was mildly distended in size. Moderate non-dependent to congealed, non-mineralized debris occupied the majority of the gallbladder lumen. The debris was subjectively immobile. Subtle evidence of peripheral gallbladder inflammation was present. No overt effusion. The common bile duct was normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. Minor retained chyme present.

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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.

SPECIES

Canine

Pancreas

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

BREED

Bichon

ULTRASONOGRAPHIC FINDINGS

- Chronic hepatopathy exhibiting non-uniformly echogenic parenchyma
- Gallbladder mucocele with minor subjective peripheral inflammation
- Mild chronic renal changes
- Suspect mild right adrenal adenomatous change
- Heterogeneous to subtly hypoechoic pancreas – potential low-grade pancreatitis with possible patient or age related variant.

AGE

12 Years

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The appearance of the liver is non-specific, yet suggestive of benign hepatopathy. Considerations may include metabolic/reactive/vacuolar (diabetic) hepatopathy, chronic non-specific hepatitis/cholangiohepatitis, cholestasis with parenchymal remodeling, potential areas of hematopoiesis to indistinct nodular to regenerative parenchyma. No overt evidence of neoplasia, which is considered unlikely.

WEIGHT

15 Pounds

Cholecystectomy with hepatic biopsies could be considered in this case assuming normal clotting status. Otherwise, continued empirical therapy for cholangiohepatitis/cholecystitis with close monitoring for evidence of increasing cholestasis, hepatic enzyme elevation, or for cranial abdominal/subxyphoid discomfort on palpation. Screening blood pressure and spec cPL could be considered.

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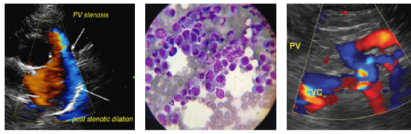
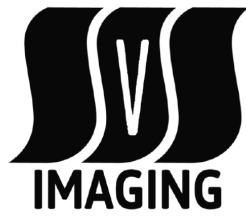
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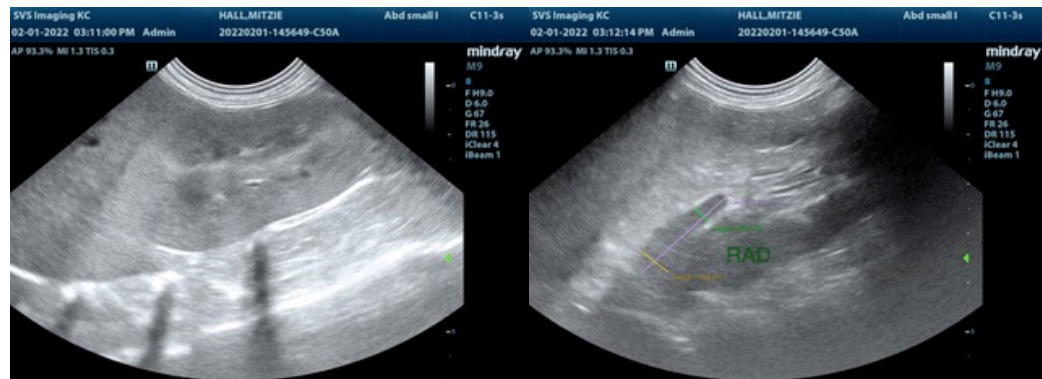
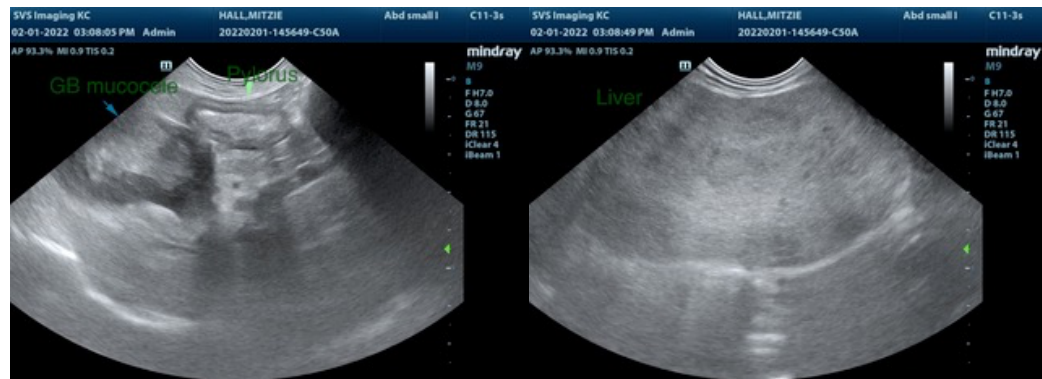
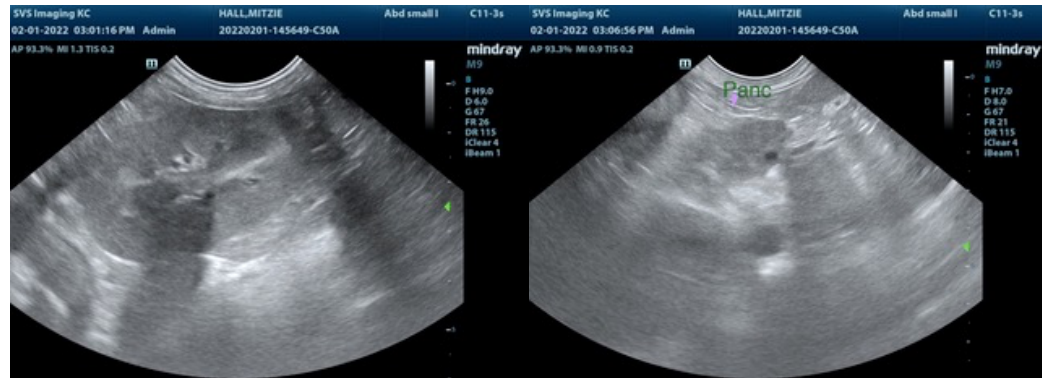
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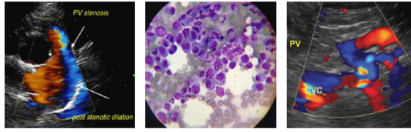
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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