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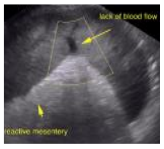

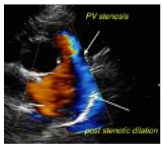

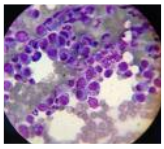
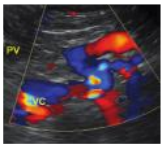

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Molly McCulloch

SPECIES

Canine

BREED

Dachshund X

SEX

Spayed Female

AGE

13 Years

WEIGHT

8.5 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Donna Markland, DVM

HOSPITAL NAME

Island Mobile Paws VS

REFERRING VET

Central Island VEH

INVOICE

20265

DATE

12/29/22

PRESENTING CLINICAL SIGNS

History: Presented on December 27 for vomiting daily for past few days. Appetite has been decreased over the past few weeks. Molly has had chronic diarrhea since June which has been controlled by metronidazole. PE findings include icterus, cranial abdominal discomfort, and dental disease. Normothermic. Bloodwork results are below.

Abnormal PE/Chem/CBC/UA Results: 12/27: Monocytes=1.4 (0-1.2) ALT=1988 (18-121) AST=492 (10-55) ALP=3452 (5-160) GGT=28 (0-13) Tbili=28 (0-5.2) Lipase=881 (0-250)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild echogenic to particulate sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

Normal renal size with asymmetrical margination was present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomedullary distinction was also present. The renal medullary volume was subjectively reduced. The left kidney measured 5.4 cm in length. The right kidney measured 5.1 cm in length. Multiple variably sized thinly walled cysts were noted, along with pinpoint to focal areas of medullary mineralization and mild bilateral pyelectasia.

Adrenal Glands

The bilateral adrenal glands were mildly prominent in size based on caudal pole width measurement in light of body weight. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 1.7 cm in length x 0.6 cm width in the caudal pole. The right adrenal gland measured 1.7 cm in length x 0.64 cm width in the caudal pole. No evidence of adrenal tumors.

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 presented enlarged in size. The parenchyma of the liver was normal to mildly increased in echogenicity. The liver parenchyma was uniform with mild to moderate coarse echotexture and evidence of minor parenchymal remodeling. 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. No masses were noted.

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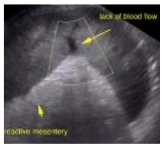
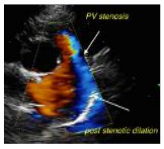
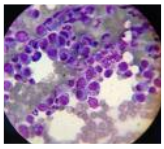
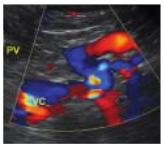

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The gallbladder was mildly distended with non-thickened yet mildly echogenic to hyperechoic walls. The gallbladder contained anechoic content with moderate dependent to nondependent regionally congealed to mobile variably echogenic debris, extending into the area of the gallbladder neck and cystic biliary duct. Potential for concurrent mild cystic biliary duct distention. No overt evidence of posthepatic obstructive criteria. Subtle to mild evidence of peripheral gallbladder inflammation was noted, exhibited by mild hyperechoic pericholecystic omentum. No evidence of peritoneal free fluid.

Gastrointestinal

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. The stomach was empty with mild luminal gas.

The small intestine presented intact wall layering with generalized propensity for prominent duodenojejunal mucosa layer, along with subtle segmental increased duodenojejunal mucosa echogenicity.

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

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

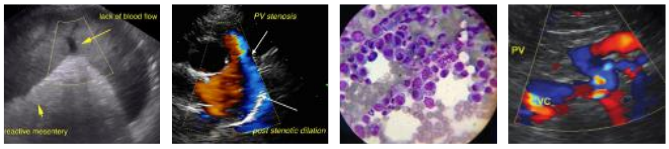
No omental masses, evidence of significant lymphadenopathy or peritoneal free fluid was present.

ULTRASONOGRAPHIC FINDINGS

- Mild urinary bladder sediment
- Bilateral moderate chronic renal changes, exhibiting multiple cortical cysts, mild medullary mineralization and mild bilateral pyelectasia.
- Bilateral prominent adrenal glands
- Hepatopathy- subjectively benign/chronic
- Gallbladder mucocele with subtle to mild evidence of peripheral inflammation
- Inflammatory gastroenteropathy pattern
- Possible concurrent low-grade pancreatitis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Assuming normal clotting status, screening hepatic FNA cytology, using a 25-gauge needle could be considered for further assessment, primarily to possibly identify inflammatory cell type, if present, and rule out the unlikely potential for hepatic neoplasia. Adrenal work up could be considered, if previous clinical signs consistent with Cushings syndrome, however, given the patients current clinical signs, the bilateral prominent adrenal glands are of unclear clinical significance.



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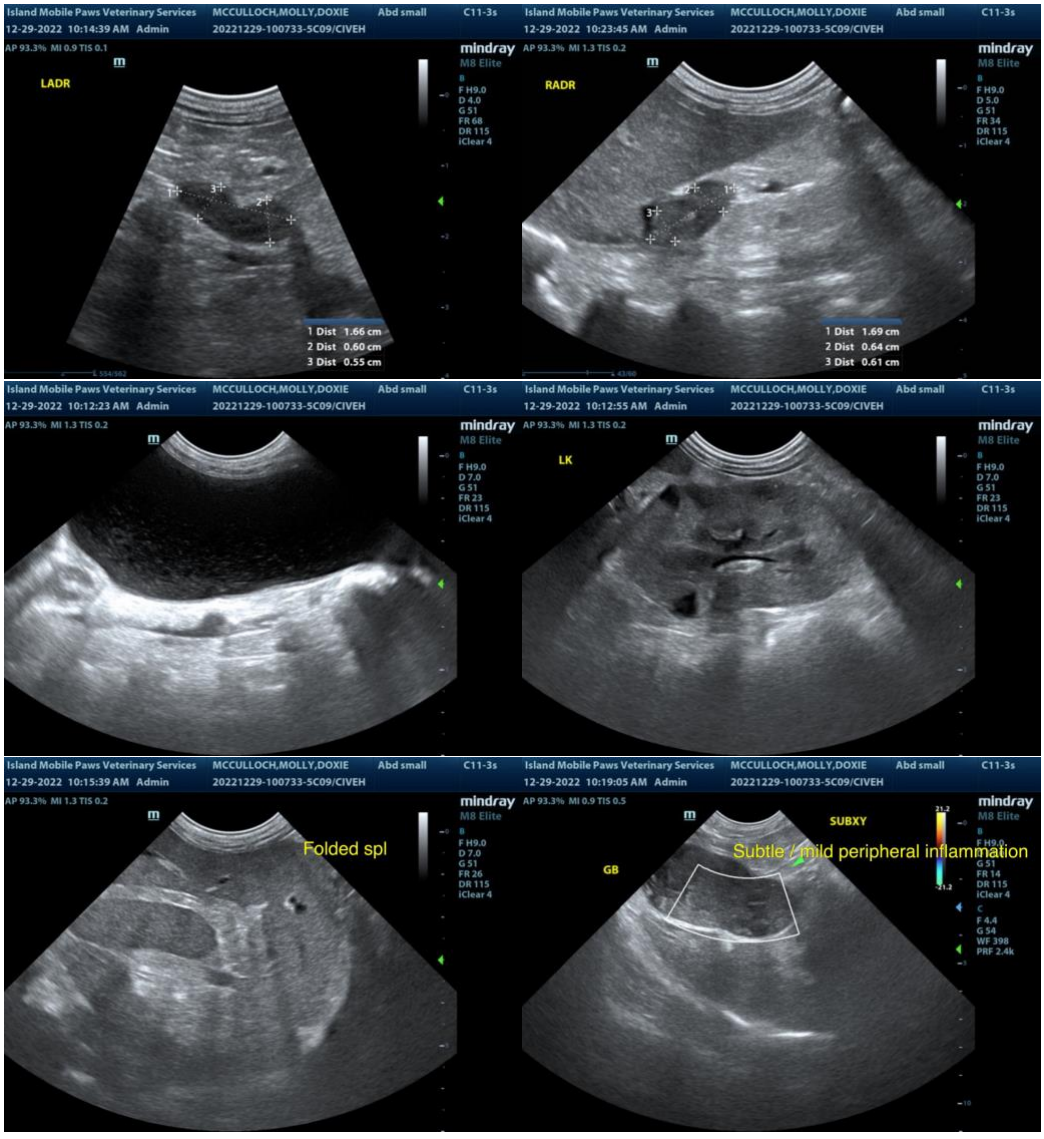
Empirically, some or all of the following protocol may be considered with as needed gastrointestinal support, along with continued monitoring for evidence of progressive cranial abdominal discomfort or cholestasis. Cholecystectomy with potential for hepatogastrointestinal biopsies may be indicated if evidence of progressive hepatic enzyme elevations, cholestasis or gastrointestinal signs.

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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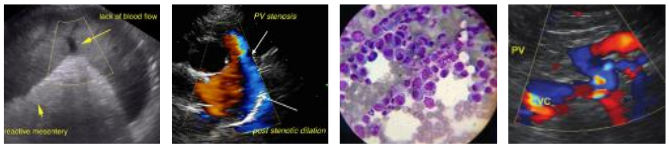

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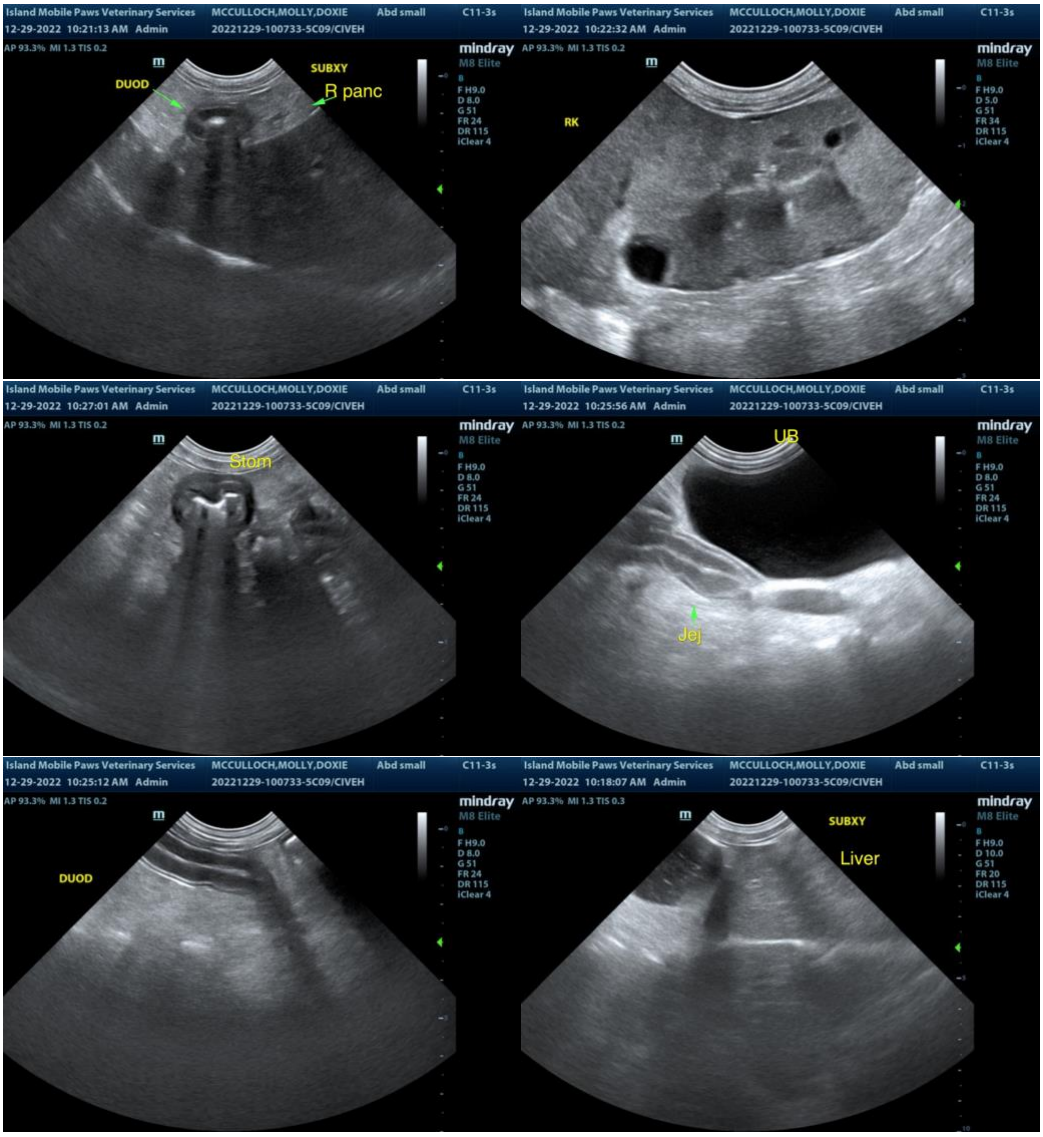

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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