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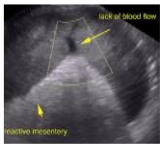
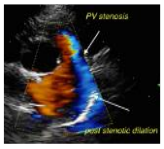
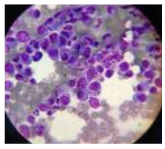
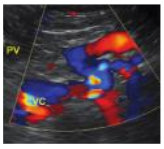




SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Branson Mullett

SPECIES

Canine

BREED

Pitbull

SEX

MN

AGE

7 years

WEIGHT

20.5 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Donna Markland, DVM

HOSPITAL NAME

Island Mobile Paws Veterinary Services

REFERRING VET

Central Island Veterinary Emergency Hospital

INVOICE

15601

DATE

12/3/22

PRESENTING CLINICAL SIGNS

Acute onset anorexia and vomiting. Presented to emerg on 12/2 after bloodwork at rDVM showed severe elevations in liver values. On PE, very painful in cranial abdomen and icteric. Witness lepto snap test is negative. Send out Lepto MAT pending. Started regurgitating overnight. Radiographs showed poor serosal detail. In-hospital medications: zentonil, cerenia, methadone, ampicillin, and metronidazole. Was given diazepam for ultrasound (last methadone dose was within 1 hour of scan).

Abnormal PE/Chem/CBC/UA Results 12/2/22: ALT=too high to read, ALP=6398 (23-212), Tbil=87 (0-15), Chol=10.12 (2.84-8.26), Lymphocytes=0.77 (1.05-5.10), eosinophils=0.01 (0.06-1.23)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and cystourethral junction 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.

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 and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 6.7 cm in length. The right kidney measured 6.7 cm in length.

Adrenal Glands

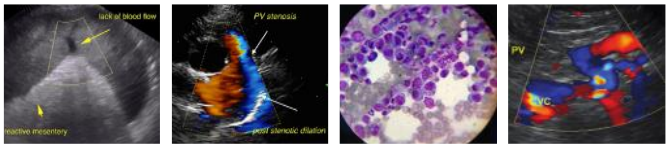
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.7 cm length x 0.43 cm width at the caudal pole. The right adrenal gland measured 3.0 cm length x 0.60 cm width at the caudal pole. No evidence of adrenomegaly or adrenal tumors.

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver/ Gallbladder

The liver presented normal to possible borderline to mild enlargement. Mildly nonuniform hypoechoic hepatic parenchyma exhibiting mild to moderate coarse echotexture was present. Subtle increased



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prominence of the portal vascular borders was noted. The capsule of the liver was normal in margination. Distinct masses or nodules were not evident. The hepatic and portal vasculature was normal in appearance. The gallbladder was mildly distended in size with thickened to hyperechoic gallbladder walls. Moderate, nondependent to organized, to variably echogenic nonmineralized luminal debris was present. Subtle peripheral gallbladder inflammation was noted. No evidence of pericholecystic or peritoneal free fluid was noted.

Gastrointestinal

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. Mild gastric distension with primarily anechoic fluid was present.

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 foreign material. Mild upper duodenal ileus was present.

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 or significant pancreatitis, inflammation or neoplasia.

Free Abdomen

No evidence of pericholecystic or peritoneal free fluid was noted. No overt lymphadenopathy was noted.

ULTRASONOGRAPHIC FINDINGS

- Acute on chronic hepatopathy pattern
- Gallbladder mucocele with cholecystitis
- Mild gastroenteritis
- Heterogeneous pancreas

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Pending Lepto testing, the primary finding in this case is the gallbladder mucocele with evidence of cholecystitis, minor peripheral gallbladder inflammation, and acute on chronic hepatopathy. This is likely indicative of gallbladder mucocele as a primary clinical player, given degree of hepatic enzyme elevation, reported icterus, and abdominal pain.

Clotting status and empirical broad-spectrum antibiotic protocol with as-needed gastrointestinal support are recommended. Pending additional diagnostics including clotting status and if the patient is stabilized, cholecystectomy with hepatic biopsies is warranted. Empirically, some or all of the following protocol may be considered if surgery is not an option. However, cholecystectomy as soon as possible is likely ideal.

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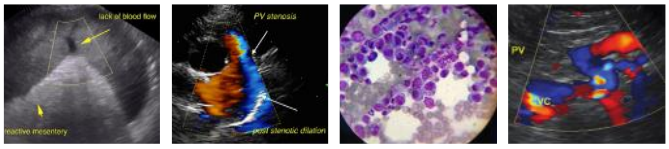

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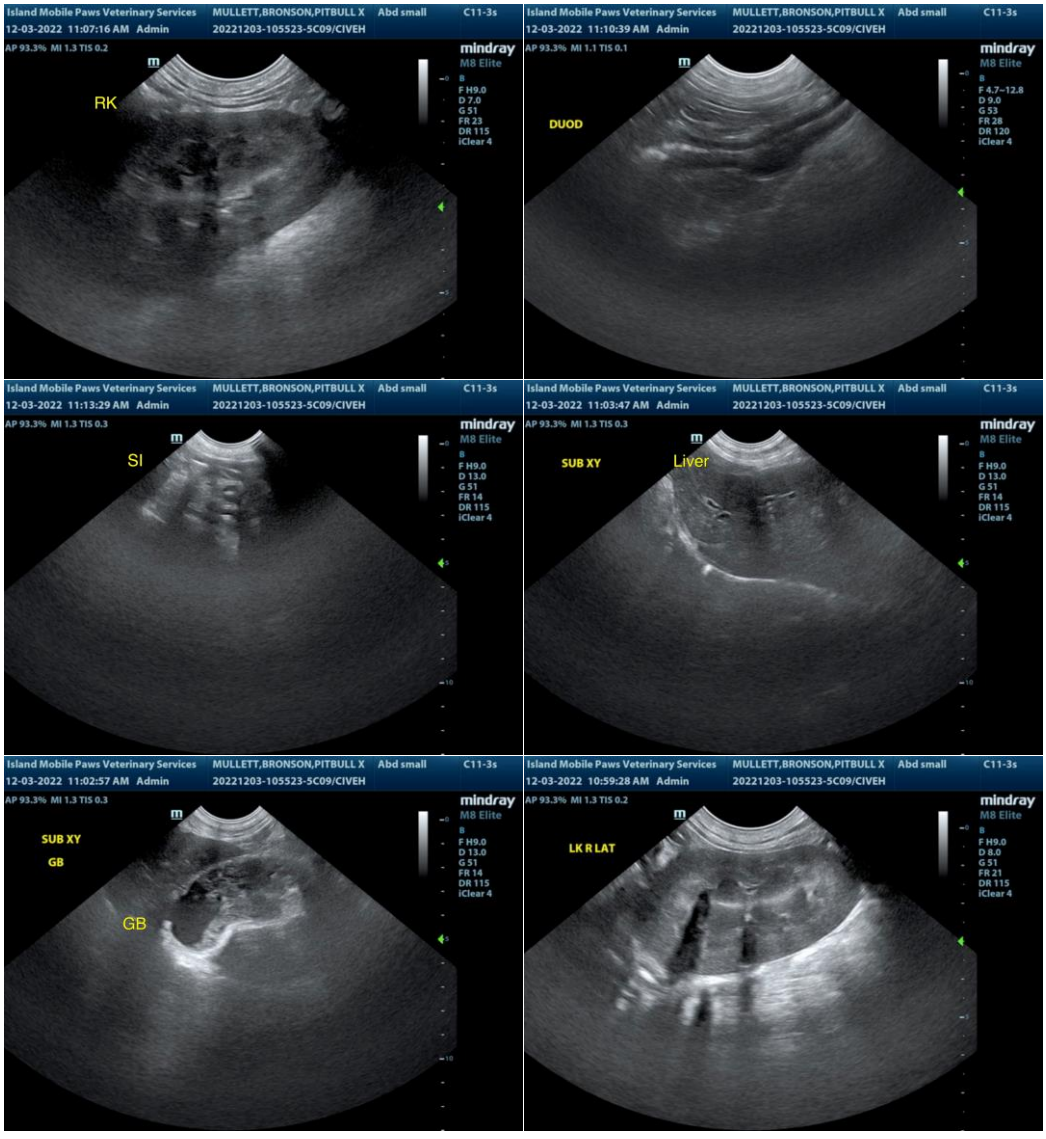
Enrofloxacin 5 mg/kg SID PO & **Metronidazole** (10-20 mg/kg po bid) over 3 weeks, **Ursodiol (**10-15 mg/kg p.o. q24h) over 8 weeks and recheck sonogram. Monitor rapid rise in ALT, SAP, Bilirubin, bilirubinuria, leukocytosis, focal cranial abdominal subxyphoid discomfort or progressive anorexia.

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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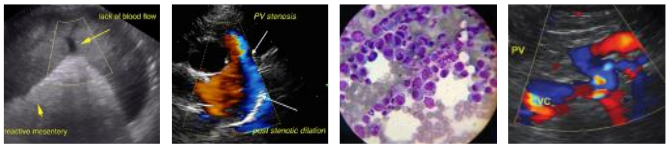

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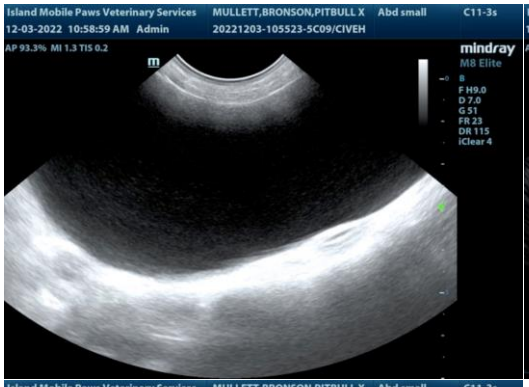

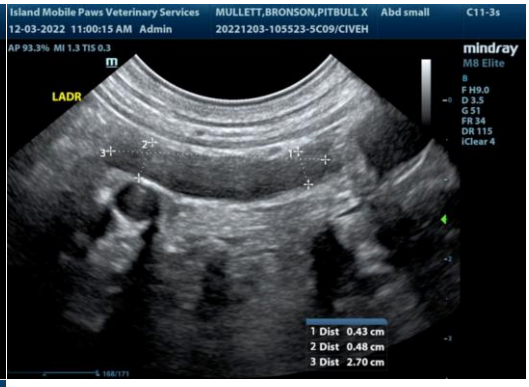

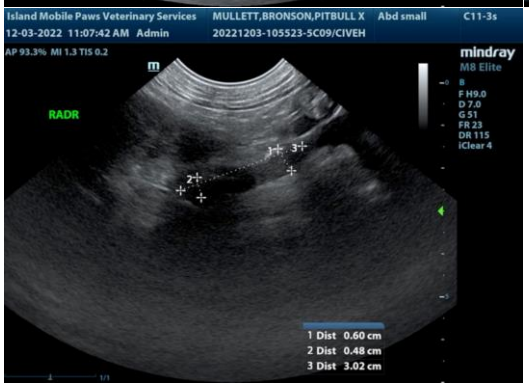

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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