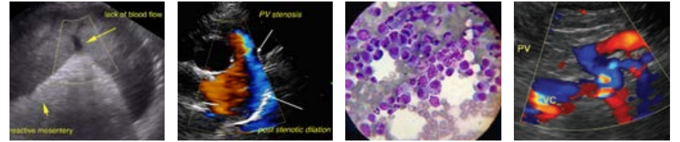


SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Miloh Plaza

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered Male

AGE

11 Years

WEIGHT

21.2 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Tech

HOSPITAL NAME

Fredon AH

REFERRING VET

Dr. Dana Nause

INVOICE

33281

DATE

12/6/21

PRESENTING CLINICAL SIGNS

VOMITING, LETHARGIC, DEHYDRATED
Abnormal PE/Chem/CBC/UA Results: SLIGHT ICTERIC, DEHYDRATED PLT: 603 RETIC:21.3 ALT: TOO HIGH TO READ ALP: 72,000 GGT: 99 TBIL: 2.4 CHOL: 459 CL:106

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.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture. The prostate measured 0.6 cm in width.

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 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 5.5 cm. The left kidney measured 4.8 cm.

Adrenal Glands

The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. No evidence of adrenal enlargement or neoplastic criteria. The right adrenal gland measured 1.8 cm length x 0.52 cm at the caudal pole. The left adrenal gland measured 1.6 cm length x 0.40 cm at the caudal pole.

Spleen

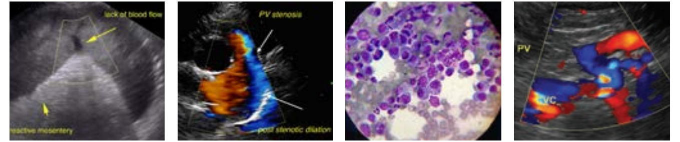
The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Multifocal, well-defined, symmetrical, echogenic nodules were present in the medial parenchyma around the hilus. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. The echogenic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

Liver

The liver was subjectively normal in size, structure, and contour. Subtle generalized increased hepatic parenchyma echogenicity noted. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was mildly distended in size with mildly prominent to echogenic gallbladder walls. Non-organized, echogenic, non-mineralized gallbladder debris occupied the entirety of the gallbladder lumen. Subtle evidence of pericholecystic inflammation, yet no evidence of pericholecystic free fluid.

Gastrointestinal

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy, primarily in the pylorus. Intact wall layering was maintained and distinct. Mild gastric distension with primarily anechoic fluid was present. Pylorus wall measured 0.60 cm.



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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. Duodenum wall measured 0.36 cm.

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 overt lymphadenopathy or peritoneal effusion was present.

PRIMARY FINDINGS

- Hepatopathy – subjectively acute on chronic.
- Cholecystitis with non-dependent , non-organized yet immobile luminal debris, mild pericholecystic inflammation – highly suggestive of atypical mucocele.
- Heterogeneous pancreas – age related/patient variant, parenchymal remodeling owing to previous inflammation, or concurrent low-grade to chronic pancreatitis possible.
- Gastroduodenitis

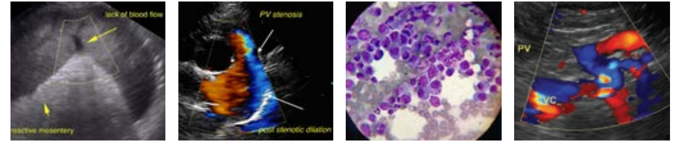
SECONDARY FINDINGS

- Benign splenic nodules – likely consistent with benign myelolipomas

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the degree of hepatic enzyme elevation, clinical signs, and presentation of the liver and gallbladder, laparotomy with cholecystectomy and hepatic biopsies +/- gastroduodenal biopsies are warranted. A coagulation panel is recommended prior to surgical considerations as well as appropriate perioperative antibiotic use if surgery is elected. If empirical therapy is elected, some or all of the following protocol may be considered with as needed gastrointestinal support and close monitoring of hepatic enzyme elevations or for persistent/progressive cholestasis. It is suspected that eventual cholecystectomy may be required in this patient, even if positive response to empirical therapy. No overt suspicion of underlying adrenal disease given the normal appearance of the bilateral adrenal glands. Assessment of T4 levels may be considered.

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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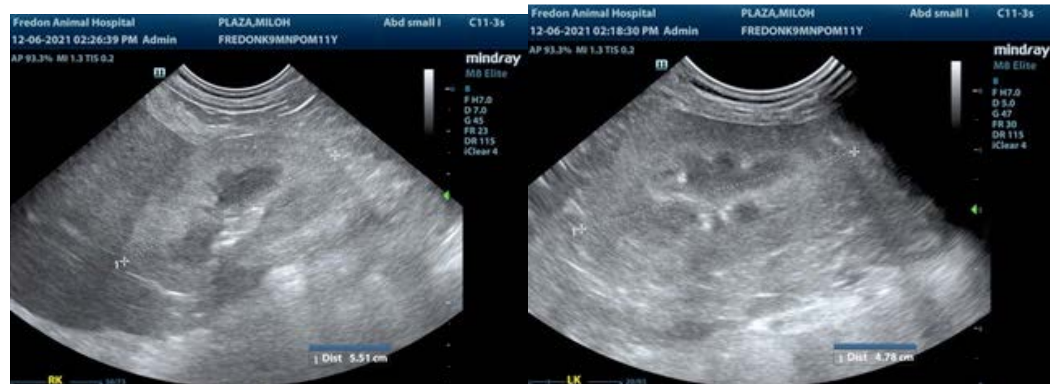

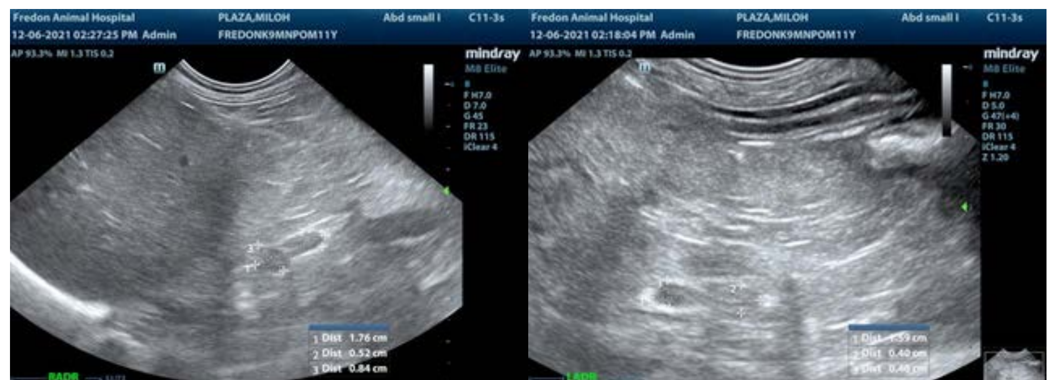

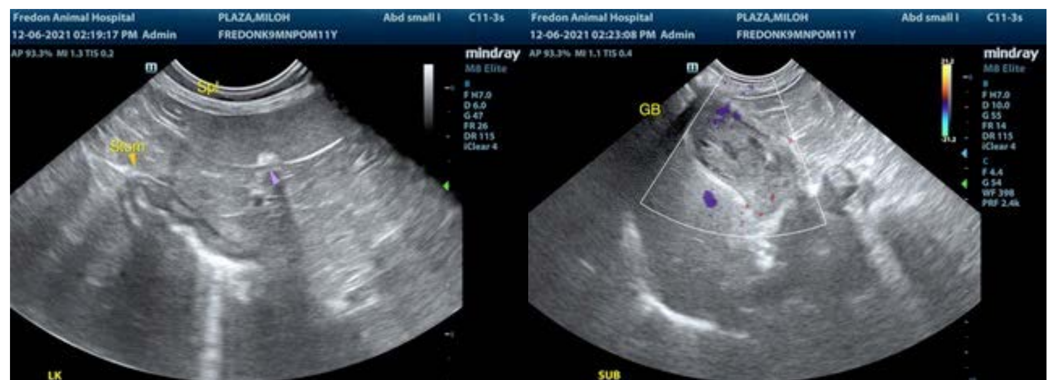

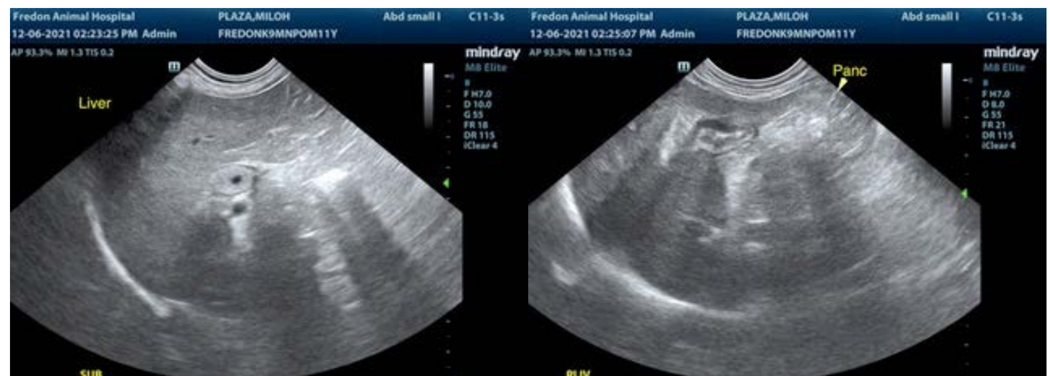

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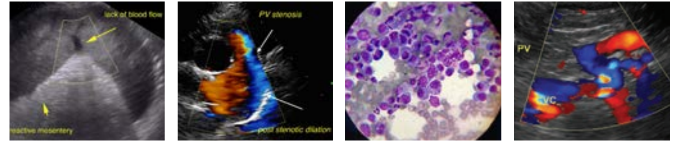

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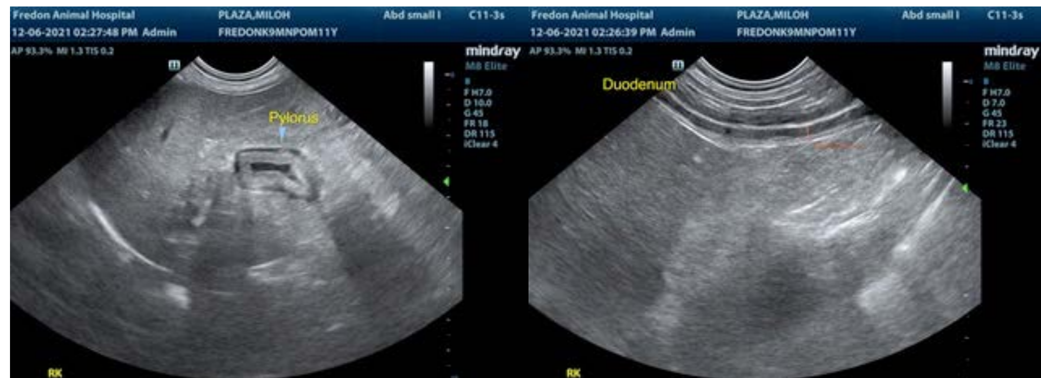

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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