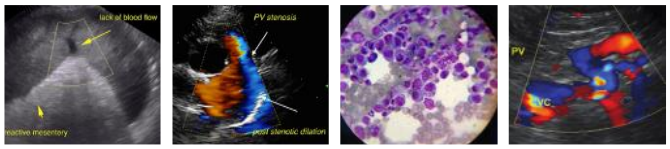
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Tikka Bitten

SPECIES

Canine

BREED

Nova Scotia Duck Toller

SEX

F

AGE

10wk

WEIGHT

7.4kg

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

12580ag

DATE

01/02/2023

PRESENTING CLINICAL SIGNS

Presented last week for neurological issues (head pressing/ataxia). Concern about TCA ingestion as meds in house. Mild ALT increase at that time. Had a history of suspected UTI at rDVM. Further diagnostics declined. Re-presented yesterday with similar signs. Owners brought in free catch urine that was malodorous and had large #WBC and suspected bacteria. PE was unremarkable other than post-prandial neuro symptoms . Bloodowork on 1/1/2023 showed elevated WBC and increased ALT and GGT. Bile acids submitted. Looking for shunt. Cysto sample submitted for urine culture. Sedated with 0.2 mg/kg butorphanol IV and 3 microgram dexdomitor IV.

Abnormal PE/Chem/CBC/UA Results: 1/1/2023: HCT=35 (37-51) WBC=22.59 (5-17) Neuts=14.7 (3-11) Lymphs=5.5 (1-5) Monocytes=1.5 (0.16-1.1) ALT=207 (8-75) GGT=5 (0-2)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 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 bilateral kidneys exhibited potential for mild increased size in light of body weight, with a normal 1:3 cortex / medulla ratio and normal corticomedullary definition. 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 6.2 cm in length. The right kidney measured 6.6 cm in length.

The area of the aortic trifurcation was free of pathology.

No evidence of pathology in the area of the uterus or bilateral ovaries.

Adrenal Glands

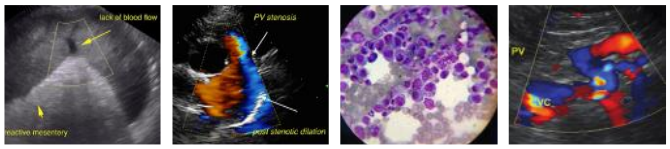
The bilateral adrenal glands exhibited borderline to mild subnormal size with overall normal position and shape with homogenous parenchyma. The left adrenal gland measured 0.22 cm width at the caudal pole and 1.5 cm length. The right adrenal gland measured 0.29 cm width at the caudal pole and 2.1 cm length.

Spleen

The spleen exhibited mild incidental folding with 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 exhibited subjective borderline to possible mild subnormal size with maintained symmetrical capsule contour and homogenous parenchyma exhibiting normal echogenicity. Suspect anomalous vessel in the area of the mid to cranial portal vein as well as in the area of the cranial abdominal vena cava measuring ~ 1.0 cm in diameter was present. Possible residual portal vein cranial to the anomalous vessel with potential portal vein diameter measuring 0.50 cm. The aorta measured 0.87 cm in diameter.



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The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

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.

Pancreas

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

Free Abdomen

No omental masses or peritoneal effusion was present.

Focal, mildly prominent to enlarged mesenteric lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). This finding is considered incidental and is not consistent with inflammatory or neoplastic criteria.

ULTRASONOGRAPHIC FINDINGS

- Subjective borderline to mild subnormal liver size
- Suspect right divisional intrahepatic shunt vs ill-defined possible extrahepatic shunt

Secondary findings

- Subjective possible borderline bilateral adrenal glands-nonspecific

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the patient's post prandial neurologic signs in conjunction with borderline to mild subnormal liver size and subjective anomalous vessel in the area of the portal vein/caudal vena cava, a portosystemic shunt is considered a primary differential with suspicion for right divisional intrahepatic shunt although potential for unclassified extrahepatic shunt could be possible. Primary inflammatory hepatic parenchymal disease or portal vein hypoplasia/microvascular dysplasia is possible. Correlation with bile acids is recommended. Referral for gold standard CT with contrast for definitive assessment with potential for specialist interventional procedure is recommended.

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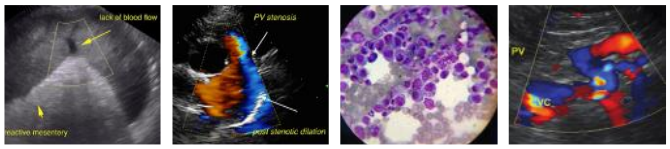

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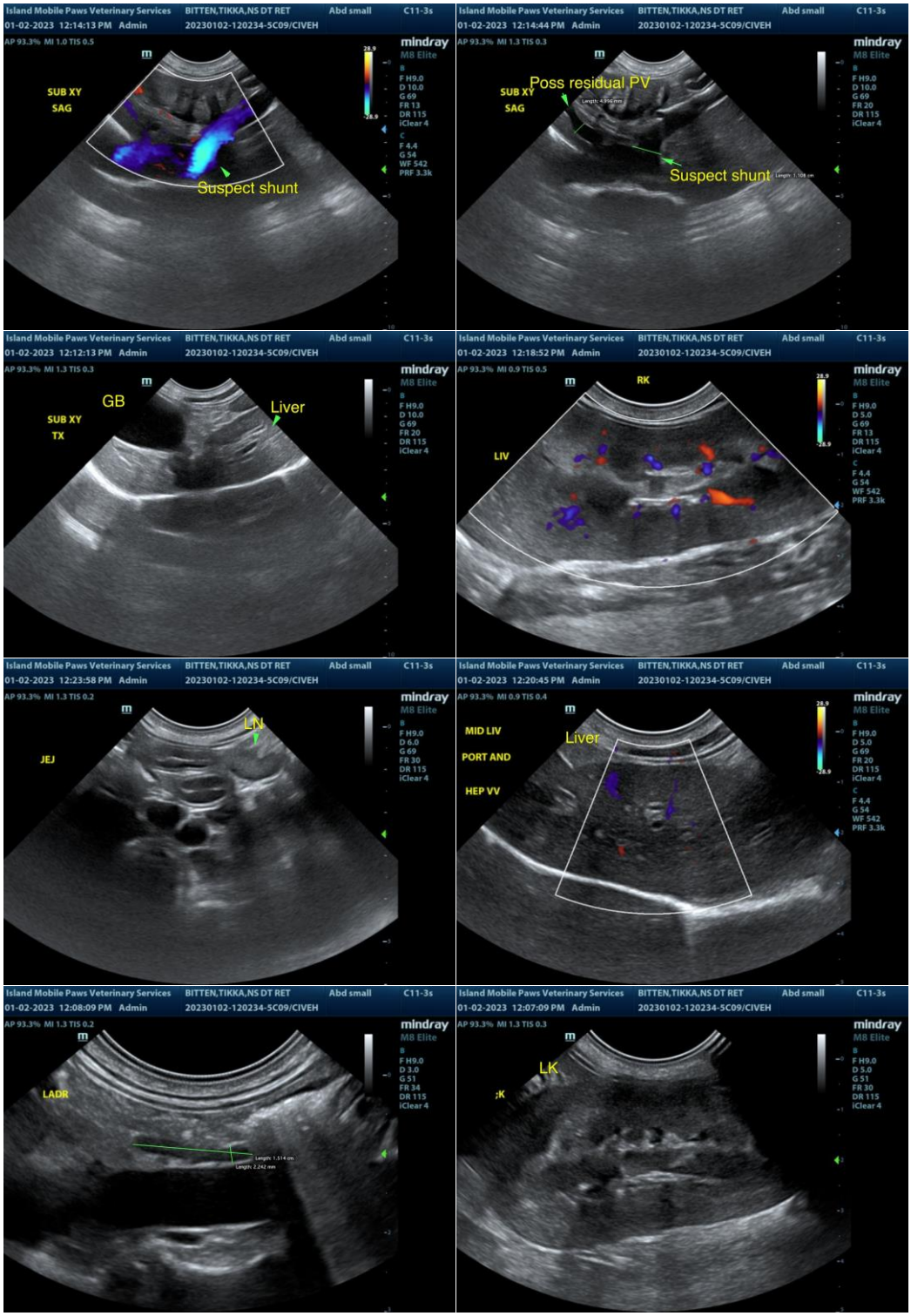

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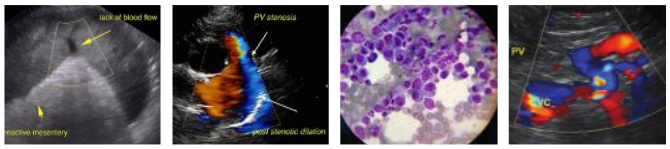

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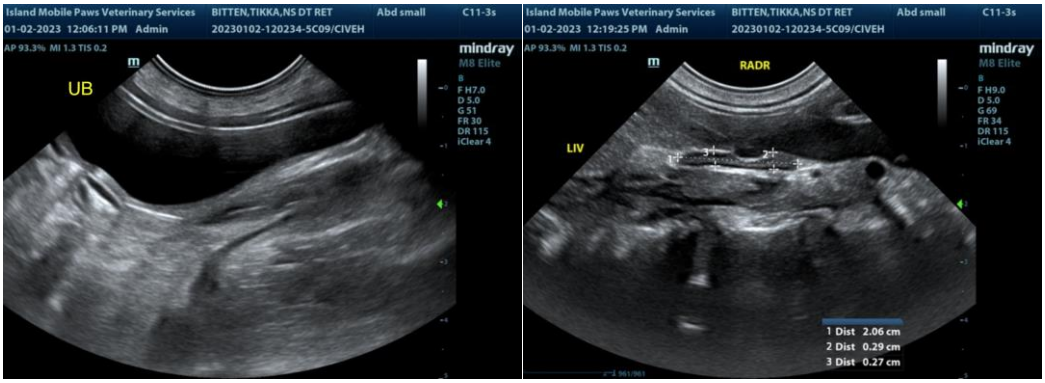

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
mac.daniel@sonopath.com