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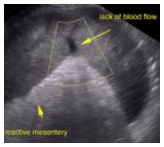

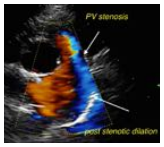

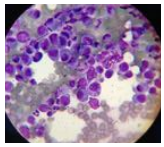
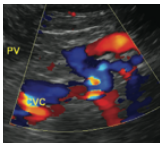

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1-800-838-4268 info@sonopath.com

PATIENT
Maggie Peterson

SPECIES
Canine

BREED
Dachshund

SEX
Spayed female

AGE
10 years

WEIGHT
15.8 lbs

INTERPRETED BY
Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY
Ashley Whitesell

HOSPITAL NAME
Dickson AC

REFERRING VET
Dr. Huneycutt

INVOICE
42021

DATE
1/10/23

PRESENTING CLINICAL SIGNS

History: vomiting and decreased appetite over past 3 weeks, bloodwork changed from September being normal to elevated liver values.
Abnormal PE/Chem/CBC/UA Results: Globulins 4.8, ALT 836, ALP 449, GGT 21, total bili 2.4 (all elevated) HCT 62.9 %

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder lumen volume is small and walls are diffusely thickened most consistent with pseudohypertrophy.

The kidneys have a smooth capsule and with hazing of corticomedullary definition to the point of inability to determine cortical/medullary ratio. No evidence of pelvic dilation was present. The left kidney measured 4.7 cm. The right kidney measured 5.1 cm.

Adrenal Glands

Both adrenal glands were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 1.7 cm in length and 0.57 cm at the cranial pole and 0.55 cm at the caudal pole. The right adrenal gland measured 1.2 cm in length and 0.63 cm at the cranial pole and 0.56 cm at the caudal pole.

Spleen

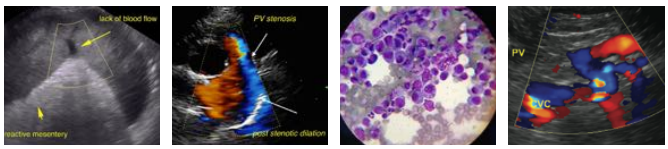
The spleen was normal with a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

Liver

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. Gall bladder is significantly distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally. No surrounding inflammatory changes.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed. The



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visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed. The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

Lymph Nodes

No clinically significant lymphadenopathy or abnormalities noted.

Free Abdomen

No masses or free fluid was noted.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

1. Normal GI tract
2. Normal liver parenchyma
3. Distended gall bladder with normal contents and normal CBD
4. Degenerative renal changes
5. Thickened urinary bladder wall - suspect pseudohypertrophy

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The gall bladder is distended, but the common bile duct is non-distended and in light of lack of anemia/hemolytic evidence the bilirubin elevation is likely owing to parenchymal disease. Fine needle aspirate is recommended for further assessment. Potentials include infectious or inflammatory hepatitis (leptospirosis, other bacterial, viral, auto-immune, toxin) and neoplasia among other things remain possibilities. Treatment for acute hepatopathy while awaiting results of cytology includes general GI and fluid support (anti-nausea, anti-emetic, appetite stimulant, analgesia if needed) and liver supportive mediations (SAM-E, milk thistle, vitamin E, ursodiol). Serial monitoring of bloodwork is recommended especially if clinically worsening and recheck imaging is warranted in the face of elevating total bilirubin to reassess for post-hepatic obstruction, though not currently suspected. Gall bladder motility study could be considered given gall bladder distension. Gall bladder distension may be secondary to dysfunctional motility or decreased emptying due to prolonged anorexia.

No overt cause of vomiting and decreased appetite is identified in this study, but is likely related to hepatopathy. Other investigation, if treatment of hepatopathy is not curative of GI signs, could include

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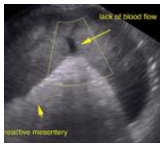
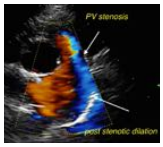
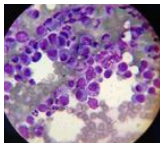
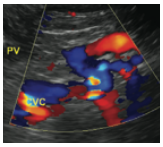

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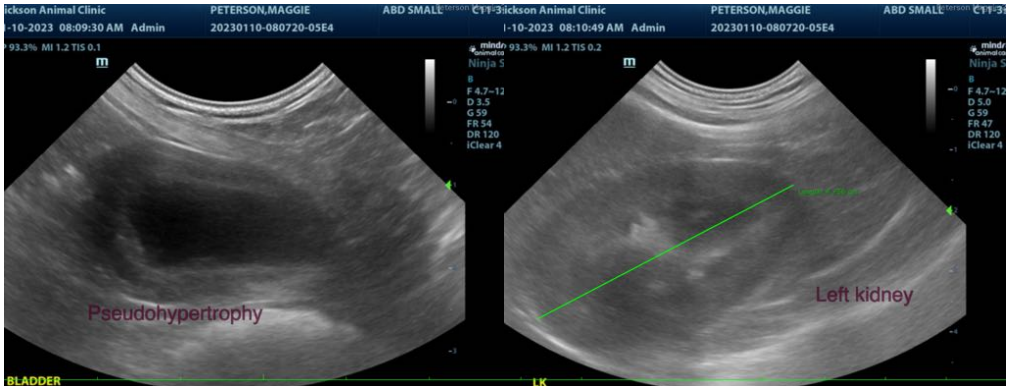
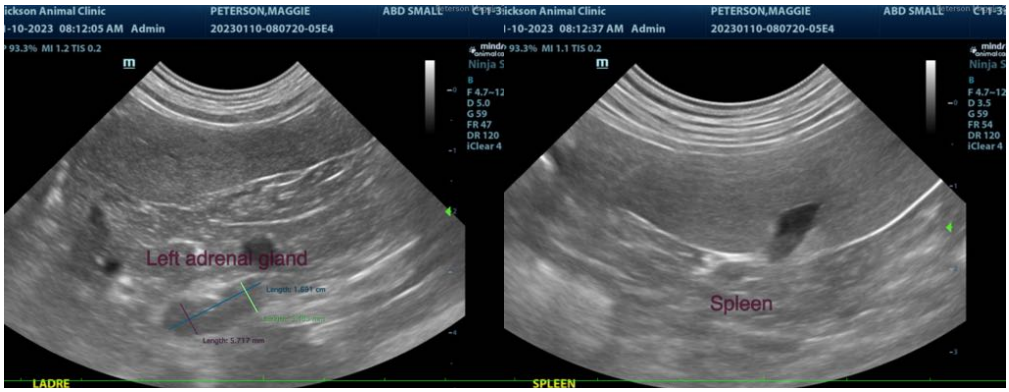
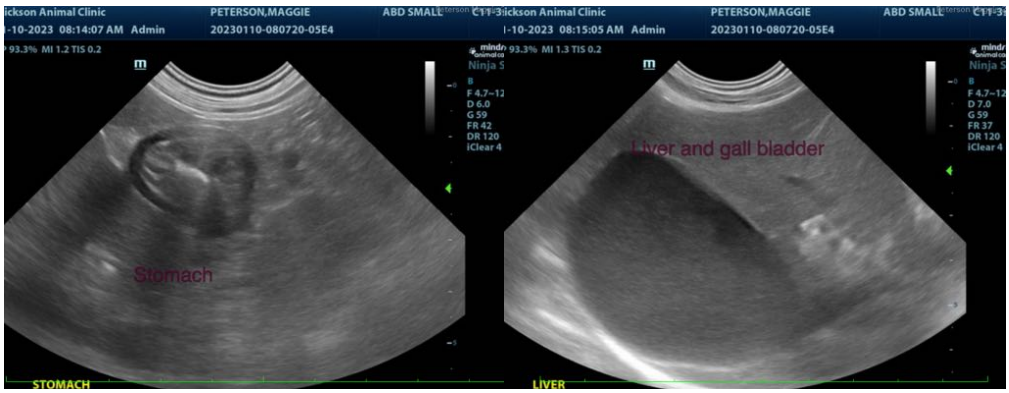
assessment of GI panel (TLI/PLI/cobalamin/folate), baseline cortisol +/- ACTH stimulation test, fecal pathogen PCR, and ultimately GI biopsies may be required for more definitive diagnosis

Renal changes are likely age related degeneration. Correlate clinical significance with blood work/urinalysis findings and clinical signs.

Urinary bladder wall thickening is likely pseudohypertrophy secondary to low volume of urine and lack of luminal distension, however, true mural thickening cannot be definitively ruled out. Re-examination when urinary bladder lumen volume is increased with time and/or fluid therapy should be considered if clinical suspicion for urinary bladder disease is high.







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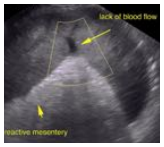
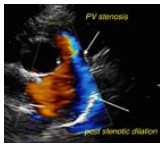
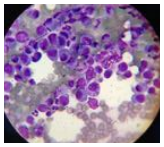
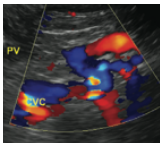

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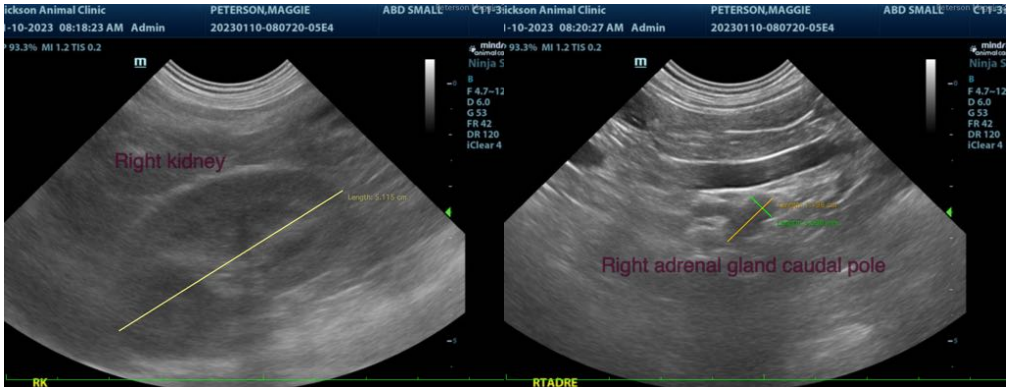

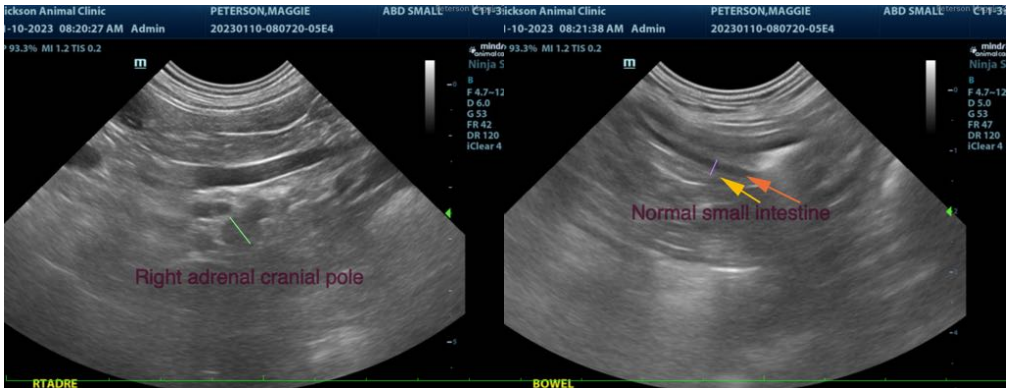

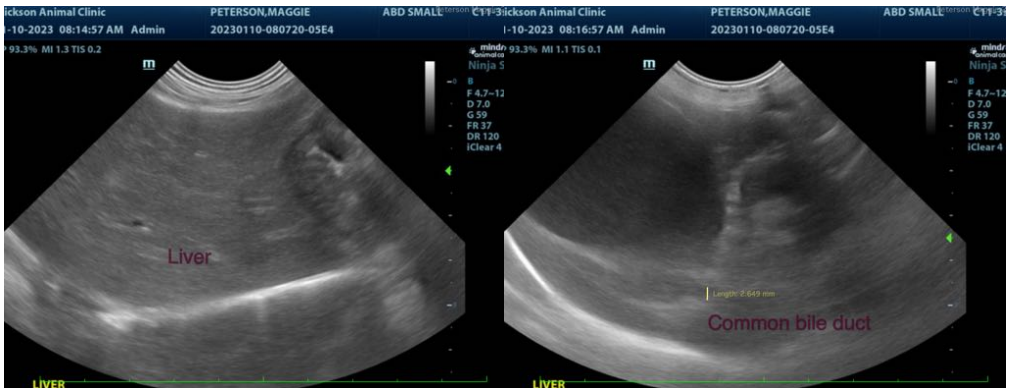

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Dr Brittany Sinclair, BVSc(hons), DACVECC
info@SonoPath.com