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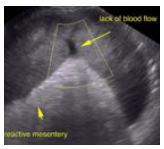

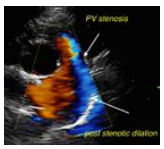

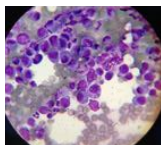
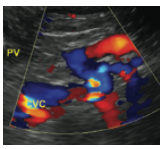

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1-800-838-4268 info@sonopath.com

PATIENT
Elvis Dillon

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Neutered male

AGE
12 years

WEIGHT
14.1 lbs

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

IMAGING PERFORMED BY
Diane McFadden, RVT

HOSPITAL NAME
Newton VH

REFERRING VET
Dr. Wyman Greenwald

INVOICE
43105

DATE
3/6/23

PRESENTING CLINICAL SIGNS

History: elevated ALT; Hx of diabetic remission. On lactalose, cisapride; convenia injection 3/2/23
Abnormal PE/Chem/CBC/UA Results: ALT 278

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder lumen volume is small and walls are diffusely thickened most consistent with pseudohypertrophy. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The kidneys were both normal size and structure, with smooth capsule and normal corticomedullary definition and ratio (cortex 1/3 of medulla). Medullary structure differed distinctly from that of the cortex. No evidence of pelvic dilation was present. The right kidney measured 5.15 cm. The left kidney measured 4.64 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 0.65 cm in length and 0.39 cm at the caudal pole. The right adrenal gland measured 1.11 cm in length and 0.39 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 moderately distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally.

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 ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness.

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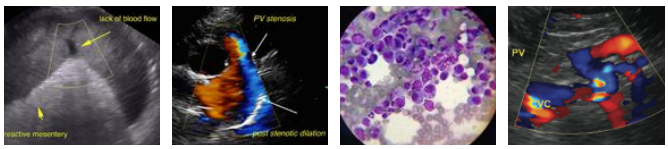

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Loops of small intestine were thickened with a prominent muscularis layering. Bowel loops follow a curvilinear path with distinct wall layering. There were no focal lesions consistent with obstruction or a mass effect observed.

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

Ileocolic lymph nodes are prominent with normal echogenicity and maintenance of normal width to length ratio with surrounding slightly hyperechoic mesentery.

Free Abdomen

No masses or free fluid were noted.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

1. Small intestinal thickening with prominent muscularis
2. Ileocolic lymphadenopathy
3. Thickened urinary bladder wall – pseudohypertrophy

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Small intestinal thickening is most consistent with infiltrative disease of the small intestine with inflammatory bowel disease or GI lymphoma being the top differentials. No overt neoplastic criteria present in the bowel given that curvilinear layering is still intact which would suggest inflammatory bowel as opposed to round cell neoplasia (LSA, MCT and similar). Intraoperative US-guided bx would be optimal in this patient to obtain the most representative samples in the GI tract. I cannot rule out a preneoplastic (LSA) state however and follow-up sonograms recommended especially If the patient is not responding to empirical efforts. Endoscopic biopsy is less invasive but may miss lesions due to inability to sample more than top 1-2 layers of GI tract and inability to obtain samples from all sections of the GI tract. Surgical biopsies are more likely to be diagnostic but are more invasive. A GI panel (PLI/cobalamin/folate) will help determine the severity of SI dysfunction, and need for vitamin supplementation.

Empiric treatment for IBD includes diet trial with either hydrolyzed or select protein diet, vitamin b-12 supplementation, GI support as needed (anti-nausea, appetite stimulant). Treatment with steroids (budesonide vs prednisolone) is often required – biopsies should be acquired prior to treatment with steroids. Steroids may ultimately be tapered to the lowest effective dose or discontinued in some cases.

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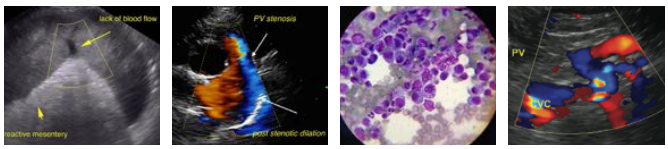

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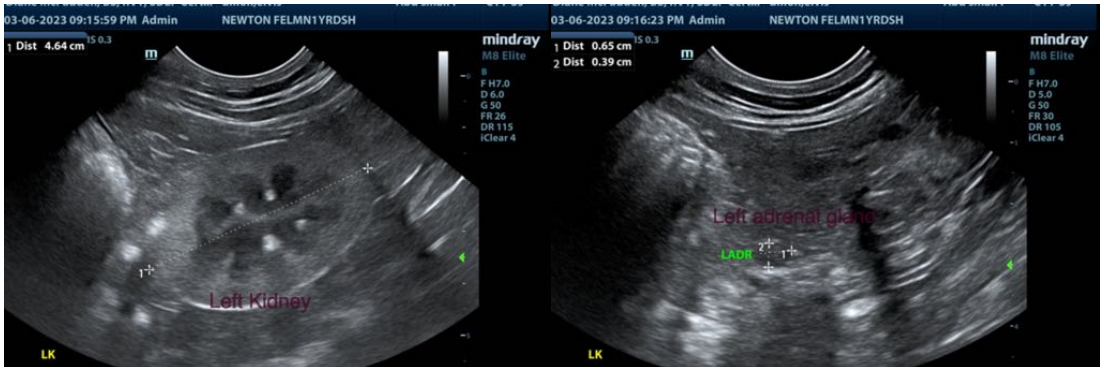
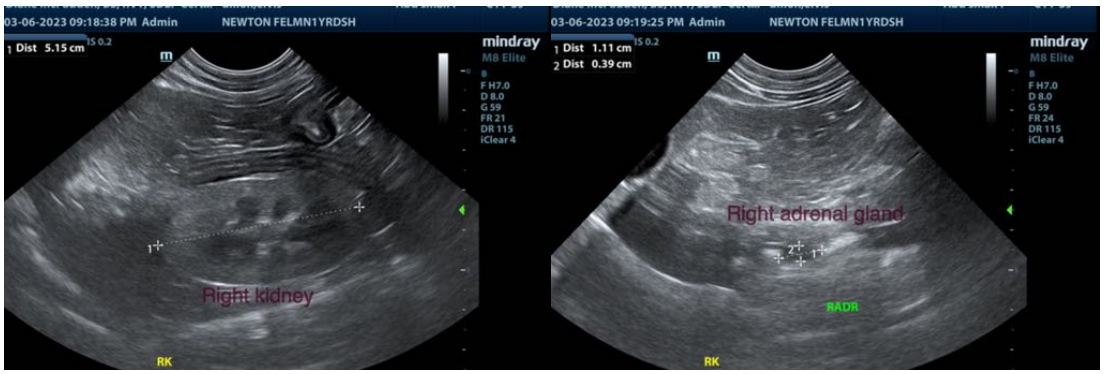
Budesonide may be less systemically absorbed that prednisolone and may be preferable in the face of a diabetic patient.

Lymphadenopathy is likely related to suspected bowel disease. Maintenance of normal structure is most suggestive of reactive lymphadenitis (inflammatory bowel disease, parasitism, migrating foreign body), infectious lymphadenitis (bacterial, viral, protozoal or less likely fungal infection), or less likely infiltrative disease (lymphoma, MCT, other) among other things. Lymph node aspirate and culture is recommended to further define this change. Serial imaging for monitoring for progression or resolution of lymphadenopathy is recommended.

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.

The liver parenchyma appears normal and there is no ultrasonographic explanation for the elevated liver enzymes in this patient. There is no significant disruption of architecture noted to suggest significant pathology. Low grade inflammatory hepatopathy/reactive hepatopathy is a likely cause of LE elevations. Fine needle aspirate is recommended to further characterize parenchymal changes and bile acid profile to assess liver function. Ultimately liver biopsy is often required for more definitive diagnosis. Empiric treatments (SAM-E, milk thistle, Vitamin E, ursodiol if bilirubin elevated or gall bladder sludge) could be tried and liver enzymes re-evaluated, especially if liver FNA does not show significant pathology before more invasive liver sampling is pursued.





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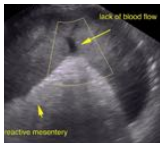
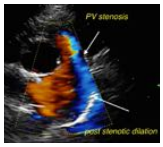
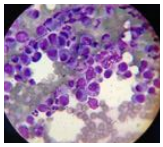
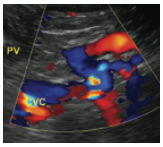

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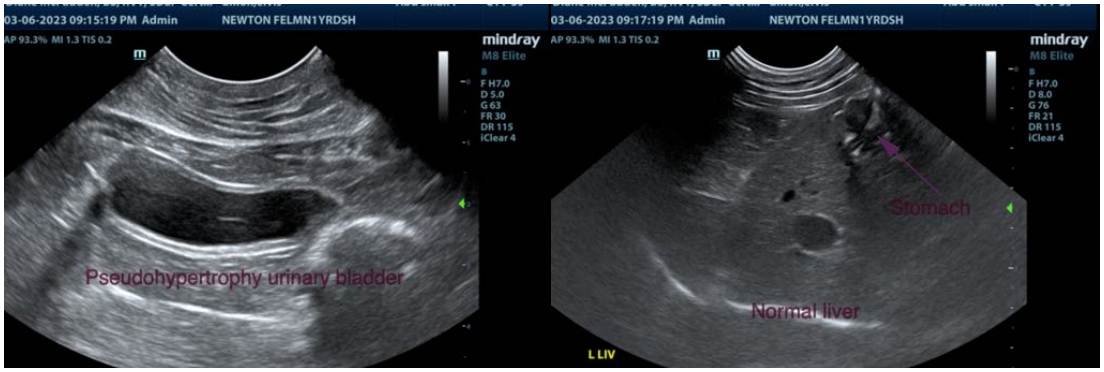

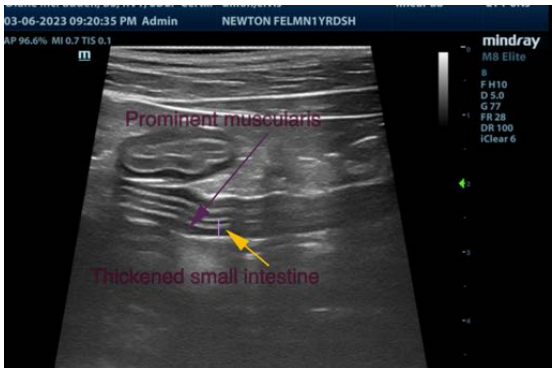

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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