SonoPath
Clinical Sonography & Telecytology
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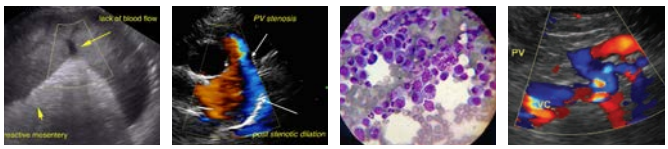


SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Molly Hansen

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

12 Years

WEIGHT

13.7 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Dr. Sheldon

HOSPITAL NAME

Advanced PetCare of Oakland

REFERRING VET

Dr. Sheldon

INVOICE

39428

DATE

7/12/22

PRESENTING CLINICAL SIGNS

Was seen 7/6 for acute vomiting, diarrhea, lethargy, anorexia. Treated with clavamox, cerenia, proviable, gabapentin. Seen today for recheck and ultrasound. Pet is back to normal, no S/C/V/D, normal appetite and energy level. No PU/PD noted by owner.
Abnormal PE/Chem/CBC/UA Results: 7/6: Cpl: abnormal Giardia: negative Major blood profile: ALT: 1984 (10-125), ALKP: 3709 (23-212), AST: 139 (0-50), GGT:122 (0-11), CHOL: 401 (110-320) 7/12: ALP: 3709, AST 139, ALT 1984

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (4.65 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.87 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal/borderline large in size measuring 0.68 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal/borderline large in size measuring 0.83 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

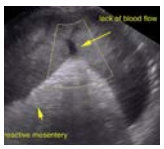
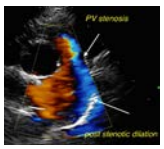
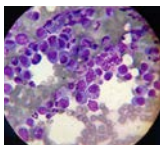
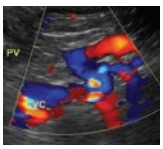
Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a large amount of primarily non-organized echogenic debris with some evidence of inflammation surrounding the gallbladder. The gallbladder wall measures at 0.24 cm. There is no evidence of bile duct dilation. Findings are concerning for significant cholecystitis.

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Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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 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. Jejunum wall measured 0.31 cm. 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 pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

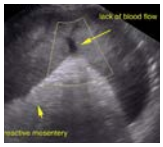
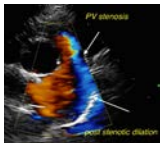
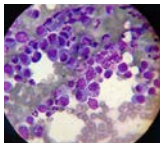
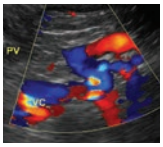
- Borderline large adrenal glands – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.
- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- Large, distended gallbladder with a large amount of intraluminal debris, wall thickening, and some surrounding inflammation – concerning for cholecystitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal lesions are visualized associated with the liver, but the gallbladder does appear large with a thickened wall and somewhat inflamed. It is very possible that this is the source of the liver enzyme elevation reported. Recommend recheck bloodwork to see if levels are improving. My experience with cholecystitis is that sometimes antibiotics and medical management can help with an acute crisis, but that often symptoms return in the future if the gallbladder is not removed.

Options moving forward would be to consider surgical removal with cultures and a liver biopsy at this time, or to continue medical management, adding in Ursodiol, and continued monitoring with ultrasound with the knowledge that surgical intervention may be needed in the near future.

Given the small size of this patient, both adrenal glands appear somewhat “plump”. If signs of Cushing’s are present, I would consider adrenal function testing, but only once the gallbladder issue is resolved, as

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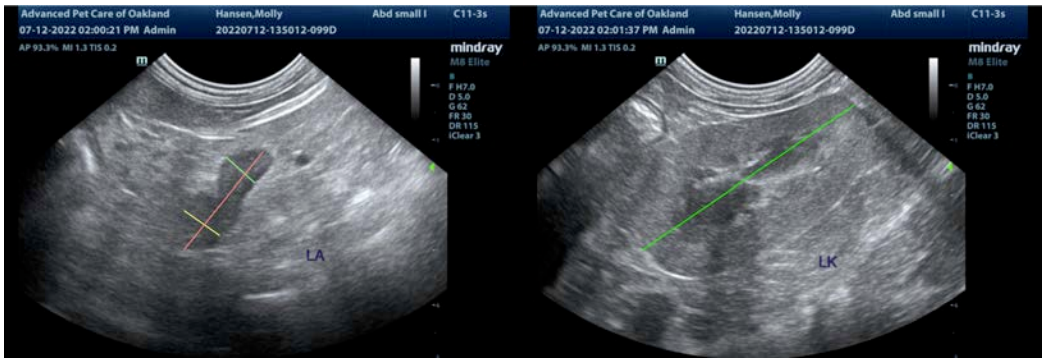
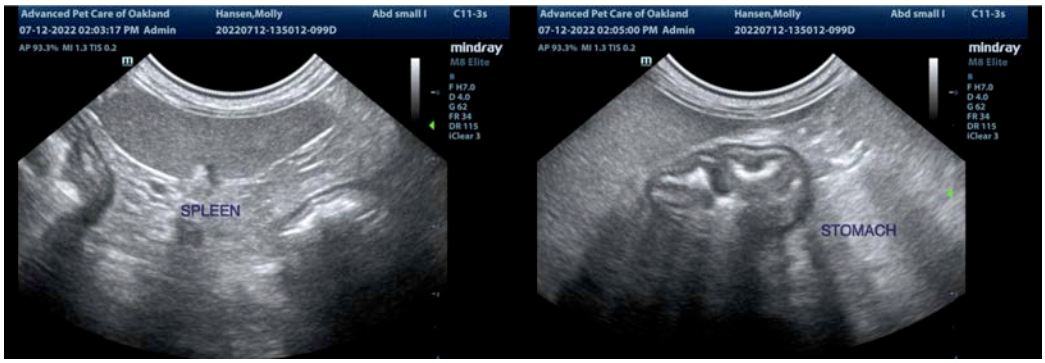
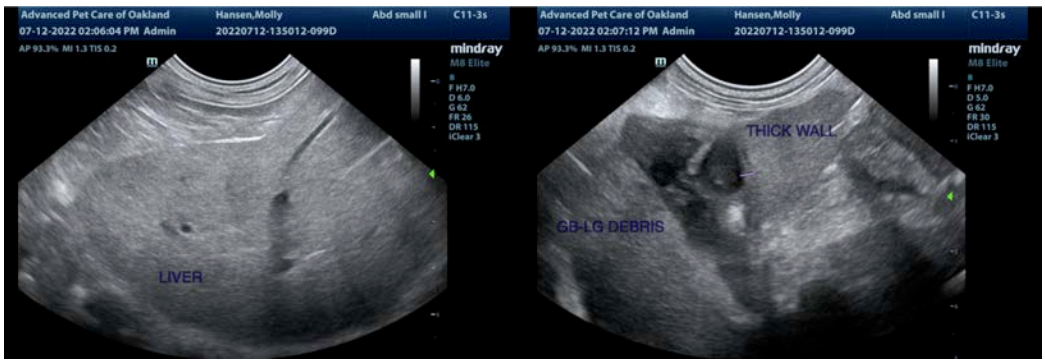
non-adrenal illness will affect these test results.

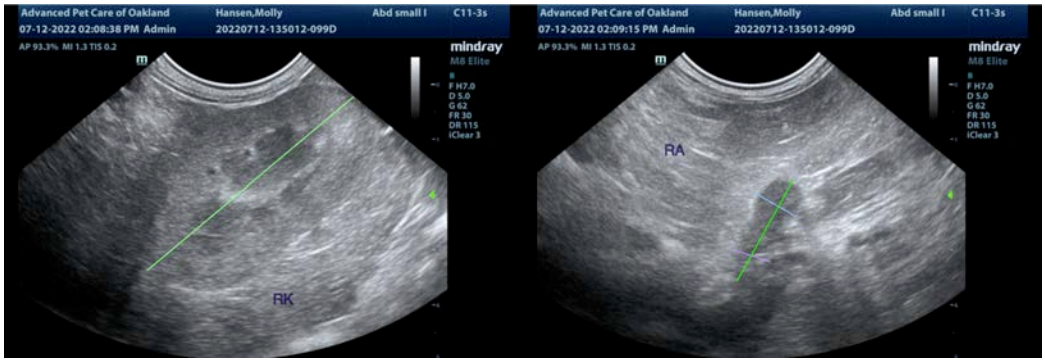
If repeat bloodwork is getting progressively worse, then consider a liver function test +/- fine needle aspirate of the liver and liver biopsy +/- cholecystectomy (likely with cholecystectomy).

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.









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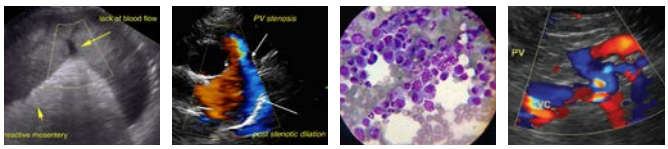

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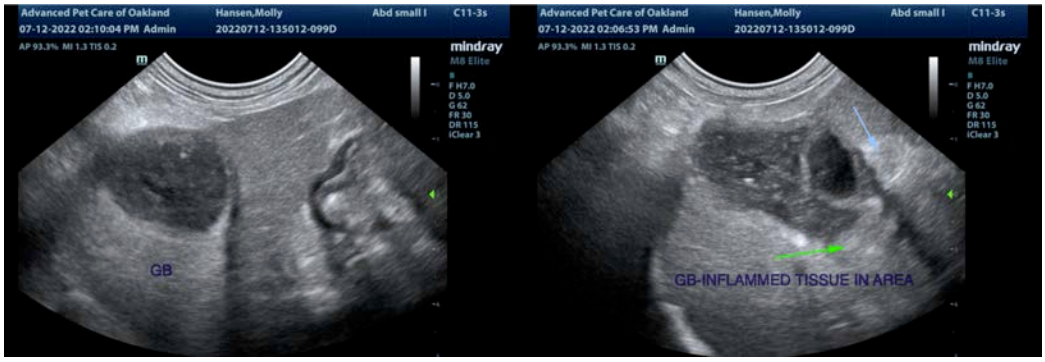

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com