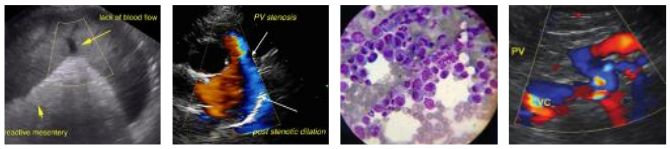
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Lalena Myers

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

17 Years

WEIGHT

7 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Jo Goodman

HOSPITAL NAME

Evandale-Blue Ash PH

REFERRING VET

Dr. Stephanie Wehmer

INVOICE

20217

DATE

12/20/22

PRESENTING CLINICAL SIGNS

History: Prev hx of spondylosis and obstipation. Presented 12/12 for concerns with inappetence for 2 days and energy level, prev decrease in appetite over the last several weeks. Exam showed dehydration and lethargy and placed her on IVF for the remainder of the day while bloodwork was pending. Administered cerenia and mirtazipine, sent home a/d food. Bloodwork showed elevated kidney and liver enzymes, decreased electrolytes, low WBC, and protein present in urine. Showed owner how to syringe feed and sent home with Denamarin. After visit, owner report she was starting to improve slowly, still needing syringe feedings. Returned for a recheck 12/19 and inappetence was back and owner has been syringe feeding all meals. Patient was icteric upon presentation compared to 12/12, rechecked liver panel. Patient returned today for IVF and ultrasound. Needed to give low dose of torb prior to u/s. current medications: miralax, mirtazapine, denamarin

Abnormal PE/Chem/CBC/UA Results: bloodwork attached - concerns for triaditis

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, or infarcts observed. The left kidney measures 3.12 cm. The right kidney measures 3.81 cm. Nonobstructive nephroliths are noted bilaterally.

Adrenal Glands

Adrenal glands are bilaterally uniformly plump egg-shaped adrenals. The adrenals are hypoechoic in echogenicity. This is most likely a benign age-related change. This change can be caused by chronic stress/disease, so investigation for/management of other disease (chronic kidney disease, hyperthyroidism, etc.) is recommended. The left adrenal gland measures 0.47 cm. The right adrenal gland measures 0.6 cm.

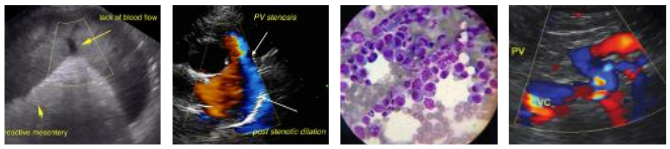
Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. The cystic duct is visualized and is mildly distended, measuring 0.46 cm thick with echogenic luminal debris present. The duct cannot be fully followed to the duodenal papilla but there is no evidence in the visible images of nodule, mass, stone, etc., resulting in an obstruction.



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Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of mildly thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen of the small intestine is empty with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

A scant amount of anechoic free fluid is present between the liver lobes. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Hypoechoic hepatomegaly-This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.
- A large amount of cholecystic debris in an overdistended gallbladder with a mildly distended cystic duct is suggestive of ongoing cholangitis/cholangiohepatitis, potentially acute on chronic disease.
- Inflammatory bowel disease (IBD) pattern – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.

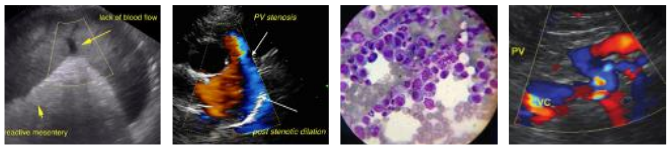
Secondary Findings

- Age-related kidney changes with nonobstructive nephrolithiasis bilaterally.
- Age-related adrenal gland changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the appearance of the liver and biliary system, cholangiohepatitis, possibly "triaditis" is the most likely cause of this patients laboratory changes. Infiltrative disease, such as hepatic lipidosis or even infiltrative neoplasia affecting the liver can't be ruled out without tissue sampling.

Recommendations include:



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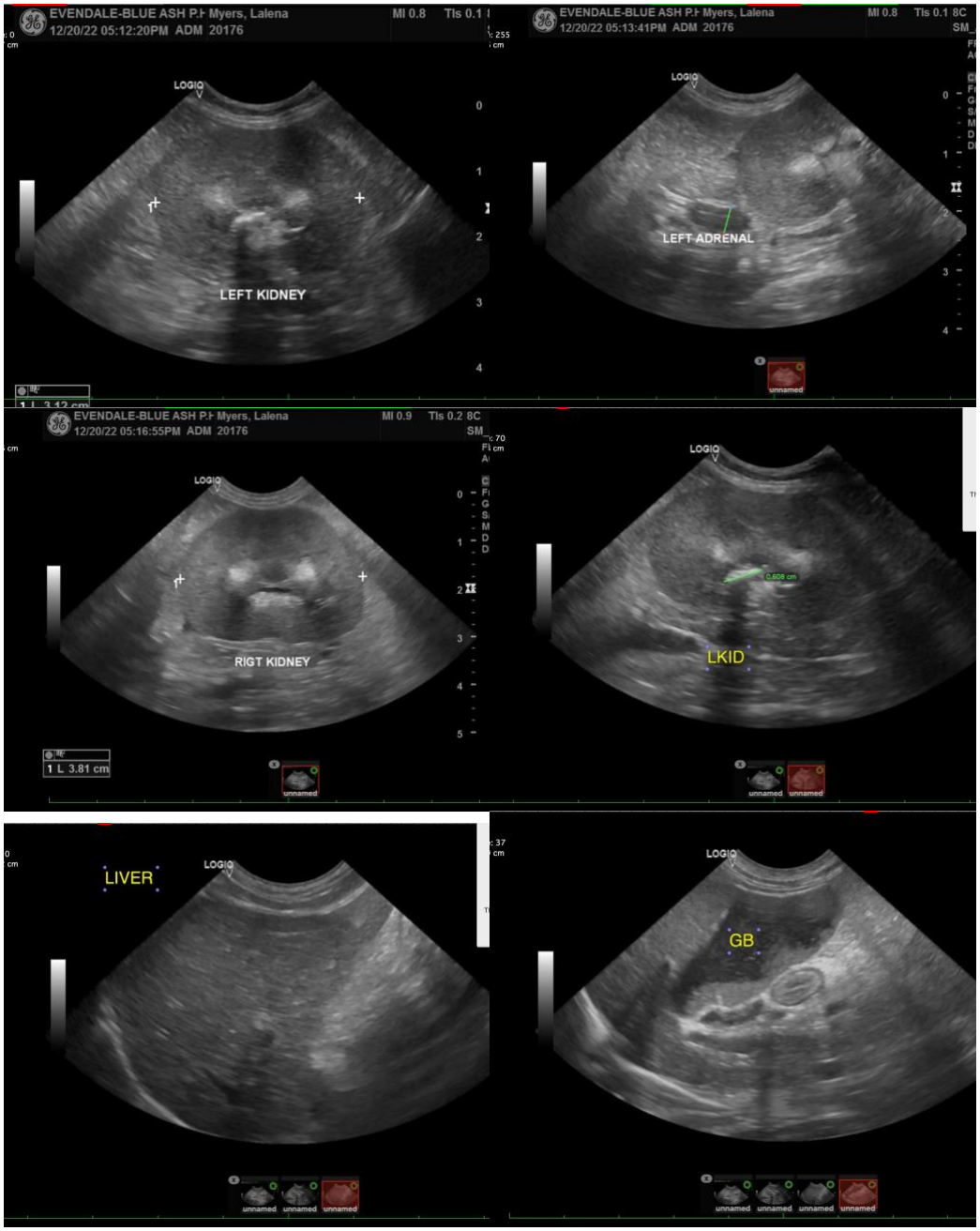
Treatment recommendations include fluid therapy, anti-emetics, gastroprotectants, hepatic nutraceuticals such as ursodiol and/or Denamarin, and broad spectrum antibiotics. Nutritional support is critical to prevent/manage concurrent hepatic lipidosis, so appetite stimulants and/or, if indicated, feeding tube placement is also recommended. If clinical and/or laboratory improvement are not noted, liver sampling in the form of a fine needle aspirate, if patients coagulation status is appropriate, could be considered or ultimately, if a biliary obstruction progresses, surgical intervention may be required.

In the meantime, A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function. And if surgery is pursued, biopsies of the GI tract should be obtained at the same time.



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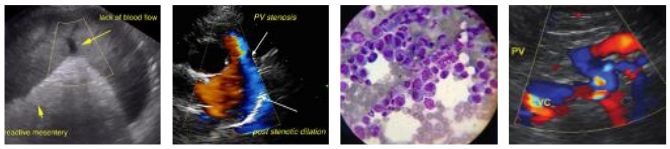

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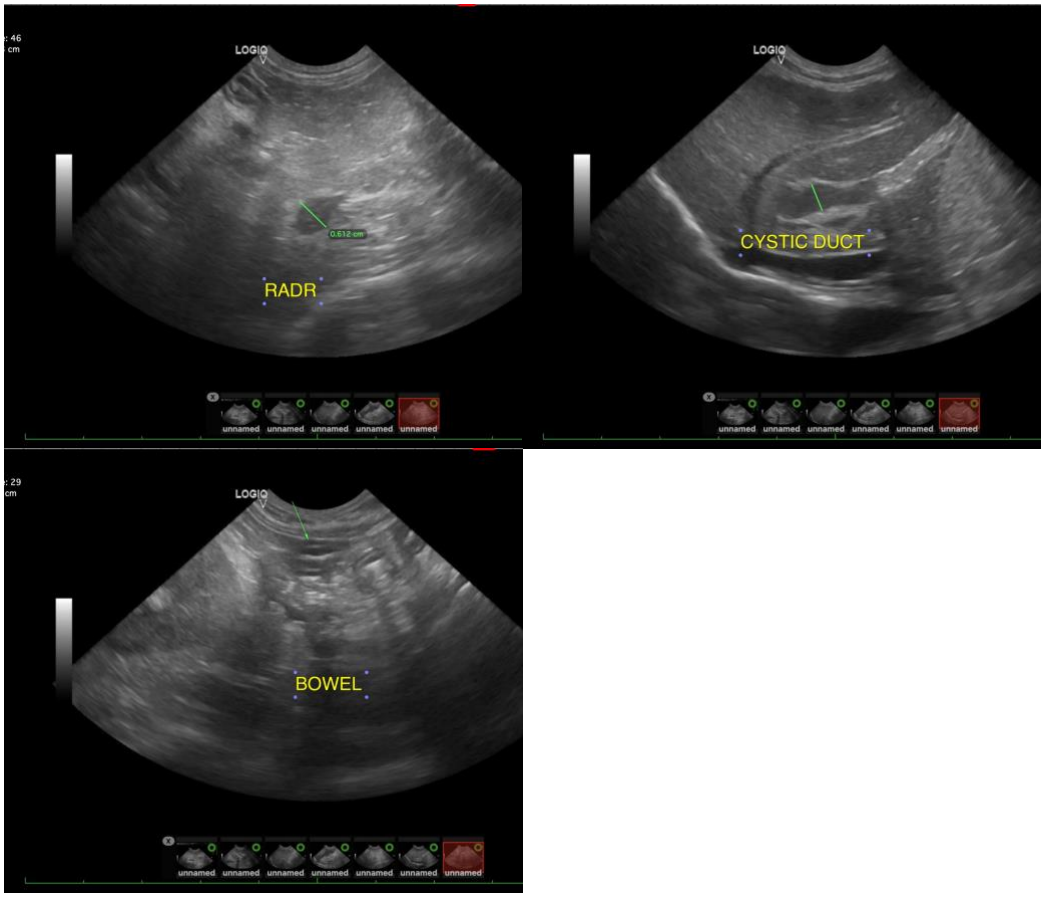

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM DACVIM

Beth.Johnson@SonoPath.com