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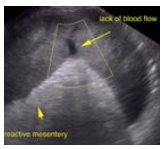

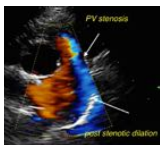

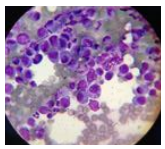
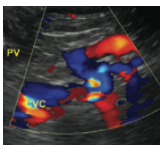

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Ruby Gussman

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Spayed female

AGE
10 years

WEIGHT
6 lbs

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

IMAGING PERFORMED BY
Dr. Carpenter

HOSPITAL NAME
Pennridge AH

REFERRING VET
Dr. Heller

INVOICE
43291

DATE
3/14/23

PRESENTING CLINICAL SIGNS

History: 10 yo FS DSH 6# Patient not sedated Presented on 2/25/23 for O noting clinical jaundice and weight loss. Eating normally. Only 1 instance of vomiting otherwise O noted no other issues/concerns. Mild lethargy only. No prev vet hx for comparison. Bloodwork (see below) showed elevated thyroid and LE elevation. Patient was started on methimazole and clavamox (not able to consistently get methimazole in so O has ordered transdermal so likely thyroid is still unregulated). Physical exam today - mild dehydration and clinical jaundice noted. Patient is still eating with no vomiting/diarrhea. Positive Murphy sign when imaging liver in region of GB.
Abnormal PE/Chem/CBC/UA Results: HCT 37% CBC - mild monocytosis only Chem - ALT 663, AST 161, ALP 534, GGT 10, Tbili 6,2 T4 - 5 Recheck liver enzymes on 10 days of clavamox: ALT 752 ALP 674, Tbili 6.3

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. 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 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 3.6 cm and the right kidney measured 4.03 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 0.83 cm in length and 0.36 cm at the cranial pole and 0.33 cm at the caudal pole. The right adrenal gland measured 0.74 cm in length and 0.26 cm at the cranial pole and 0.24 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. The parenchyma is slightly heterogenous with a coarse appearance. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The gall bladder is moderately distended with anechoic fluid, with hyperechoic non-shadowing debris present. There is no surrounding free fluid or signs of active inflammation.

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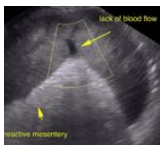

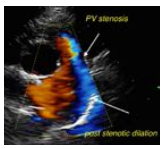

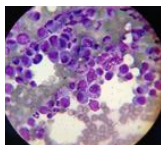
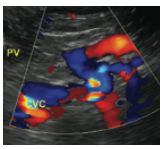

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Gastrointestinal

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 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

Entire pancreas is enlarged and hypoechoic with multi-focal slightly irregular to spherical areas of hypoechoic fluid accumulation. No mass effect consistent with pancreatic neoplasia visualized.

Lymph Nodes

No clinically significant lymphadenopathy or abnormalities noted.

Free Abdomen

There is a scant amount of free fluid near the liver.

ULTRASONOGRAPHIC FINDINGS

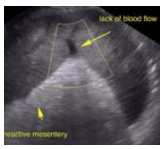
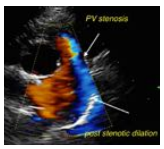
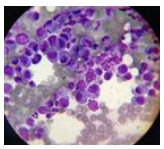
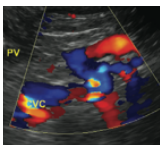
Primary Findings

1. Pancreatitis
2. Gall bladder debris
3. Coarse liver parenchyma
4. Scant free fluid near liver

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Pancreatic changes along with scant free fluid is most consistent with acute pancreatitis with a possible chronic component given presence of multifocal pancreatic cysts/fluid accumulations. Measurement of PLI is recommended to further support diagnosis. Given liver parenchymal changes and severely elevated bilirubin with a non-distended gall bladder and lack of anemia, hyperbilirubinemia must be owing to liver parenchymal disease. Fine needle aspirate is indicated to further characterize liver parenchymal changes. Ultimately liver biopsy may be required for more definitive diagnosis. If this is pursued, pancreatic biopsy is recommended at the same time to rule out pancreatic neoplasia.

Treatment for pancreatitis and hepatitis is supportive and involves fluid support, GI support (anti-nausea, appetite stimulant), analgesia and enteral nutrition as indicated. in the presence of elevated liver enzymes, antibiotics should be considered. Antibiotics that are effective against gram-negative,

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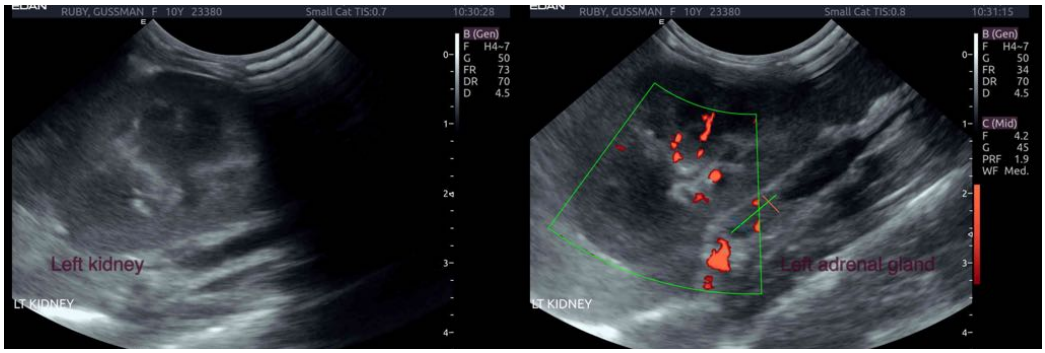
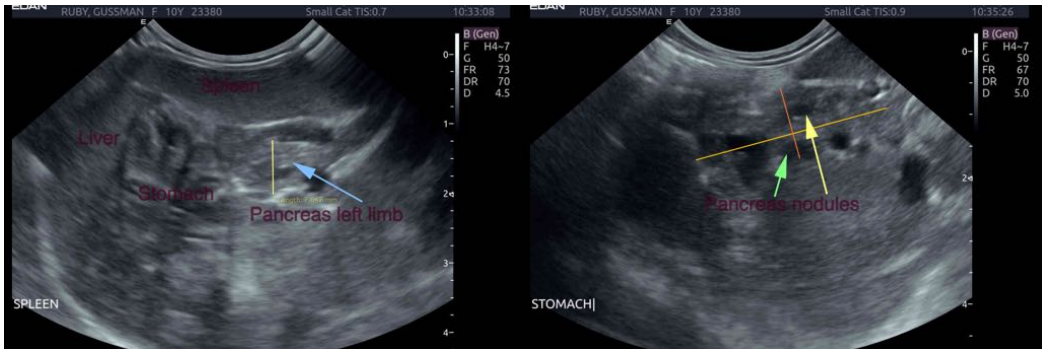
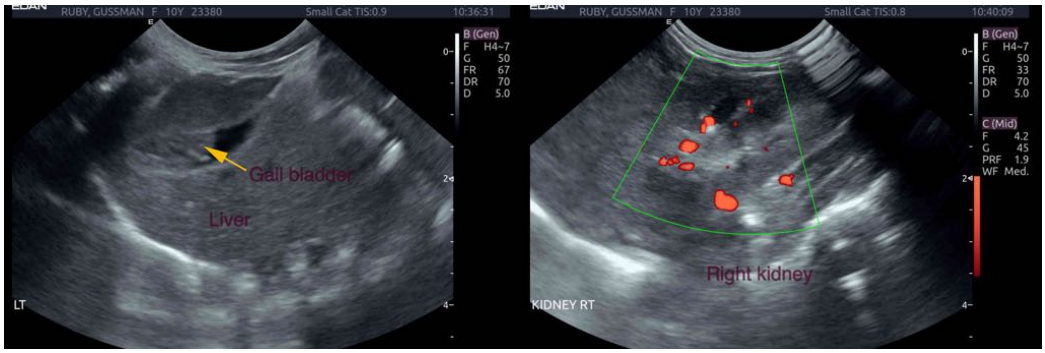
aerobic, enteric bacteria and excreted into the bile are recommended. Amoxicillin, amoxicillin-clavulanic acid, cephalosporins, and fluoroquinolones are suggested first choices. Metronidazole (7.5 mg/kg PO, IV q 12 hrs) may be added for extra anaerobe coverage. Empiric treatments (SAM-E, milk thistle, Vitamin E, ursodiol) could be tried and liver enzymes re-evaluated, especially if liver FNA does not show significant pathology before more invasive liver sampling is pursued.

Although GI tract is ultrasonographically normal, feline triaditis is a possibility. This is an autoimmune inflammatory condition affecting the pancreas, liver and GI tract. Treatment is as above, with possible need for hydrolyzed protein or novel protein diet and often the addition of steroid.







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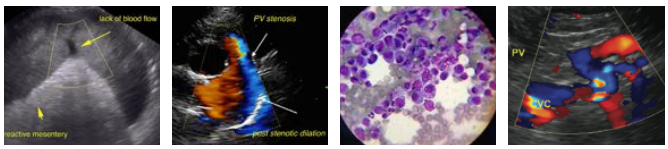

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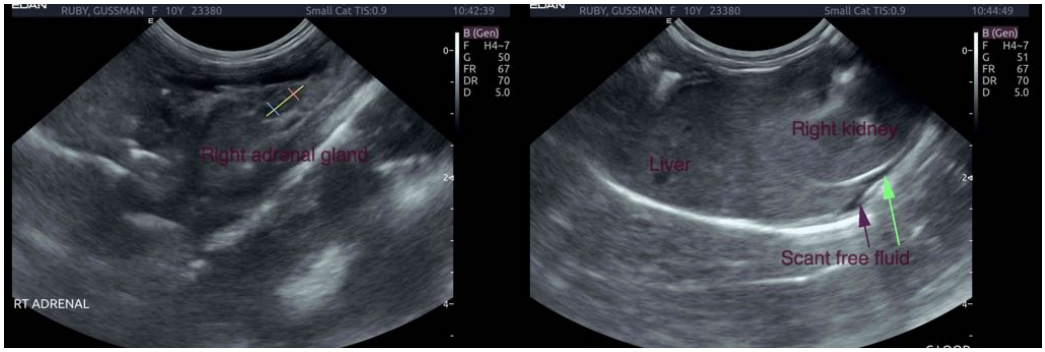

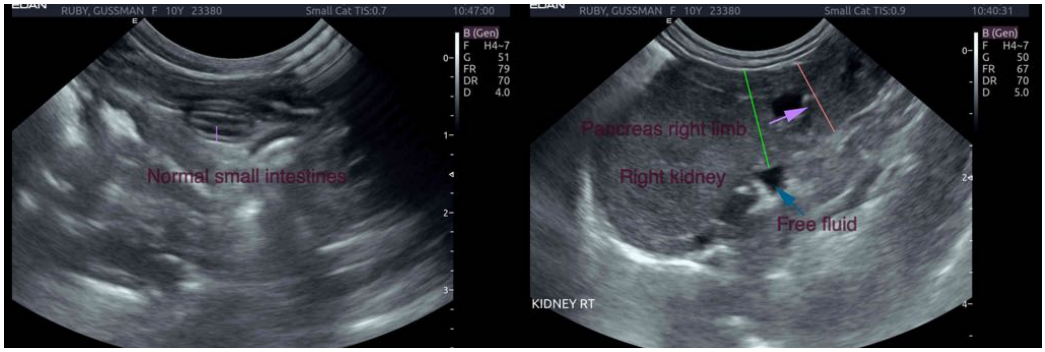

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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