IMAGING PERFORMED BY

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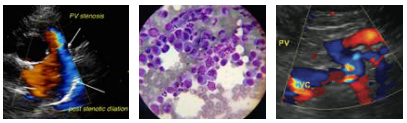

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE
12/17/21

PATIENT
Tobias Estermeyer

SPECIES
Feline

BREED
Bengal

SEX
Neutered male

AGE
4/11/07

WEIGHT
11.75 lbs

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

IMAGING PERFORMED BY
Rachel Brilhart RDMS

HOSPITAL NAME
Cat Sense Feline Hospital

REFERRING VET
Dr. Sinclair

INVOICE
94711

PRESENTING CLINICAL SIGNS

History: Tobias was adopted by the current owners this summer. He is a very active Bengal but still seems to require a lot more calories than usual to maintain his weight (500kcal/day). He was declawed at a different vet and his ALT was noted to be mildly elevated. That veterinarian placed Tobias on clavamox to see if that would help it to go back to normal but the value instead has increased and the AST is now elevated. Suspect IBD +/- separate liver issue. He has been on a commercial raw diet (initially Instinct Freeze-dried raw when they first adopted him and then Instinct Ultimate Protein Grain-free Raw-coated). The owners have been trying to find a non-raw diet that he will eat but he has been very difficult in that regard.
Lab Results: ALT on 10/11/21=277, 11/18/21: ALT=453; AST=132; BUN=39.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

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 (3.59 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 (4.13 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 in size measuring 0.35 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 in size measuring 0.46 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 subjectively normal in size, and 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. A duplicated gallbladder is present. Both lumens are moderately distended. The wall of the gallbladder is not thickened and has smooth

mucosal surfaces. Luminal contents are primarily anechoic. The cystic and common bile duct are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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 uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. The jejunum measured 0.25 cm. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display 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 pancreas is prominent and hypoechoic as compared to the surrounding isoechoic 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. There is mild mesenteric lymphadenopathy present particularly around the ileocecal junction with lymph nodes measuring 0.22 cm, 0.28 cm and 0.3 cm. The omentum is of normal uniform echogenicity.

Heart

A brief view of the heart was submitted. No pericardial effusion was seen.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- Prominent, hypoechoic pancreas. The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

- Mildly heterogenous liver. Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy.

- Prominent muscularis layer to the small intestine. The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma.

- Prominent mesenteric lymph nodes. The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

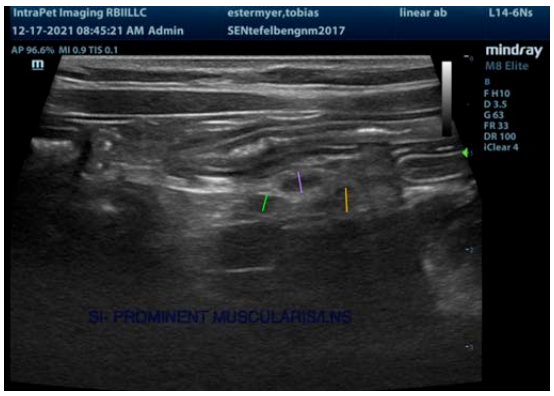
SECONDARY FINDINGS:

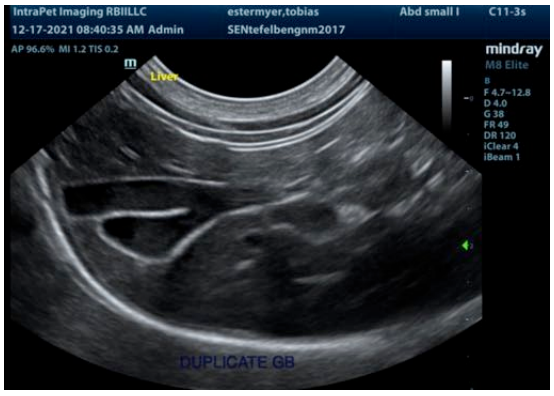
- Duplicated gallbladder. This is likely an incidental finding.

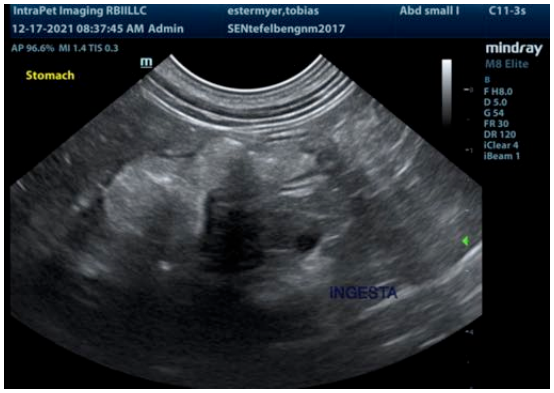
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The ultrasonographic lesions observed are mild and relatively non-specific. There are no focal lesions associated with the liver and the gallbladder changes are unlikely to be clinically significant. Unfortunately the sonographic changes do not always reflect the severity or cause of the hepatopathy. Systemic causes for cats with elevated liver enzymes include hyperthyroidism, diabetes, toxicities (meds, etc.), FIP, etc. If these conditions are unlikely then a primary hepatopathy (infectious, inflammatory, lipidosis, neoplasia) is suspected.

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc..
- Recommend thyroid evaluation (if not already done)
- If not already done consider pre and post prandial bile acids to evaluate liver function
- Consider fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- If cytology is not helpful and there is no response to therapy, consider liver biopsy with samples obtained for histopathology and culture.
- If triaditis is suspected consider therapy for cholangiohepatitis (fluids, antibiotics , +/- ursodiol,+/- steroids), testing for pancreatitis and evaluation for IBD (GI panel to Texas A&M GI lab)



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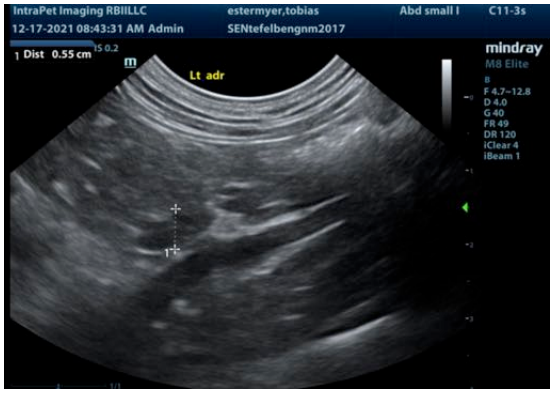
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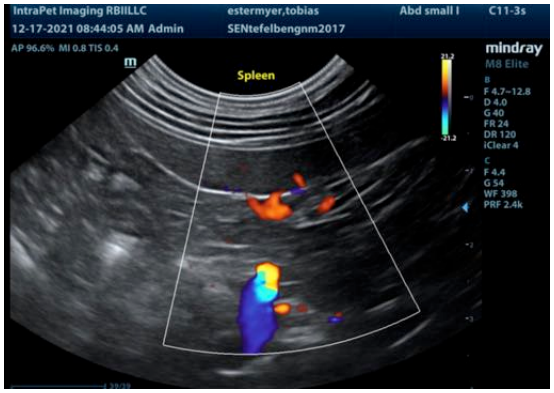

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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