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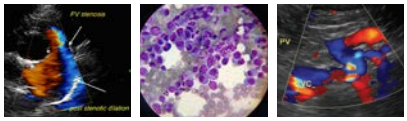

SonoPath
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DATE

12/14/22

PATIENT

Jake Malin

SPECIES

Feline

BREED

DLH

SEX

Neutered Male

AGE

5/19/14

WEIGHT

5 lb 11 oz

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Eldersburg VH

REFERRING VET

Dr. Alper

INVOICE

43453

PRESENTING CLINICAL SIGNS

Pt presented for vomiting & not eating. pt vomited some food up sometime before Thanksgiving (11/24), then 10 days later vomited liquid/phlegm. Last Monday (12/5) pt vomited up food again, then 2 days later (12/7) vomited liquid/phlegm. Friday (12/9) pt did eat a very small amount of his food, but vomited it up the next morning. pt not eating regular food, but o offered cheerios & pt did eat a little bit of those. pt seems to be interested in food, will walk up to dish & smell food, but then walks away. O has been giving water by syringe for the last couple of days. pt is urinating normally still, but hasn't had a bm since Friday (12/9). no d/c/s

Current Medications: budesomide, gabapentin (hasn't had in a few days), proviable (hasn't had in a few days)
Lab Results: CBC: anemia resolved, lymphocytopenia (secondary to budesonide). Chem: wnl, elevation in ALT resolved
Radiographs: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Declined.
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 (4.24 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal 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 (3.92 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. No evidence of a mass effect.

The region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. 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 intrahepatic bile ducts appear prominent and dilated with too numerous to count intrahepatic stones visible. Additionally, the cystic and common bile duct appear thick walled and have numerous intraluminal stones.

The gallbladder lumen is mildly to moderately distended. The wall of the gall bladder appears somewhat thickened, measuring at 0.25 cm, with a relatively smooth mucosal surface. There are at least two shadowing intraluminal choleliths visualized, measuring approximately 0.34 cm and 0.25 cm. The cystic and the common bile duct appear significantly dilated and tortuous with a thickened wall and numerous intraluminal stones. One of the largest measures at approximately 0.61 cm. The bile duct measures at 0.43 cm.

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 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. The duodenum measured as normal (between 0.13-0.38cm in wall thickness) and the jejunum measured as normal (between 0.15-0.36cm.) 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 large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with mild to moderate pancreatitis. Prominent pancreatic duct noted at 0.38 cm.

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 hyperechoic in the cranial abdomen.

PRIMARY FINDINGS

- Large, heterogeneous liver with intrahepatic biliary stones – 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.

- Thickened gallbladder with choleliths and a thickened dilated cystic and common bile duct with intraluminal stones – Findings are most consistent with cholecystitis and a partial or complete biliary obstruction.

- Large, hypoechoic pancreas with dilated pancreatic duct and mildly hyperechoic surrounding mesentery – The pancreatic changes are most consistent with moderate pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.

SECONDARY FINDINGS

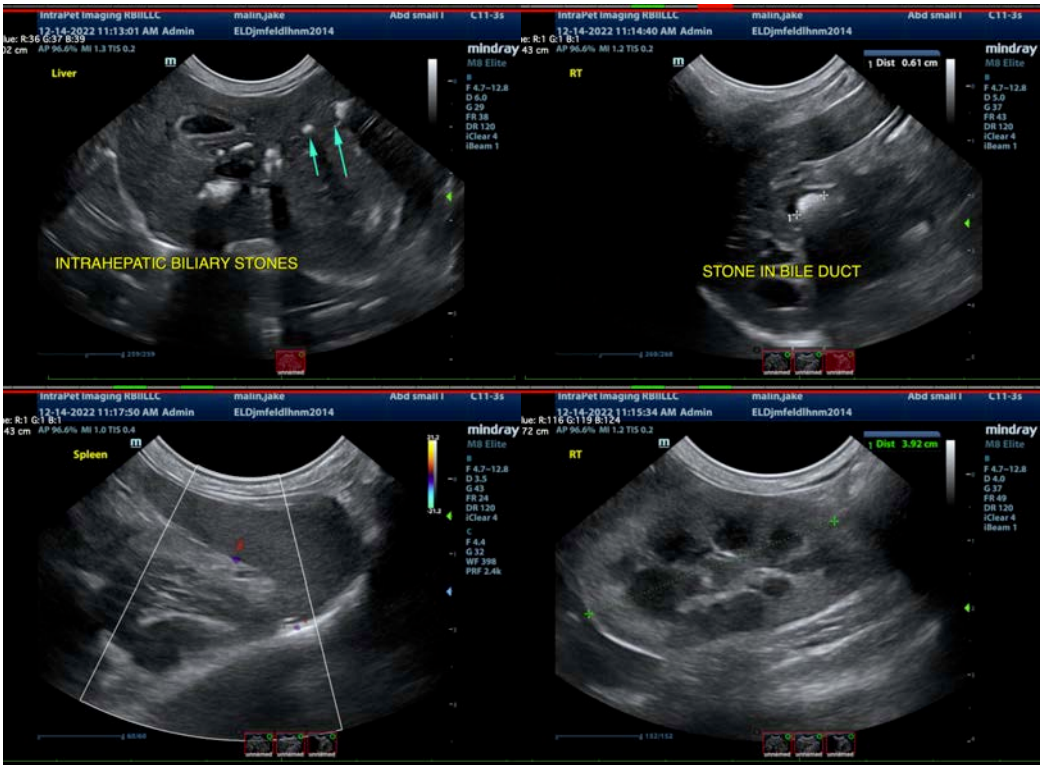
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

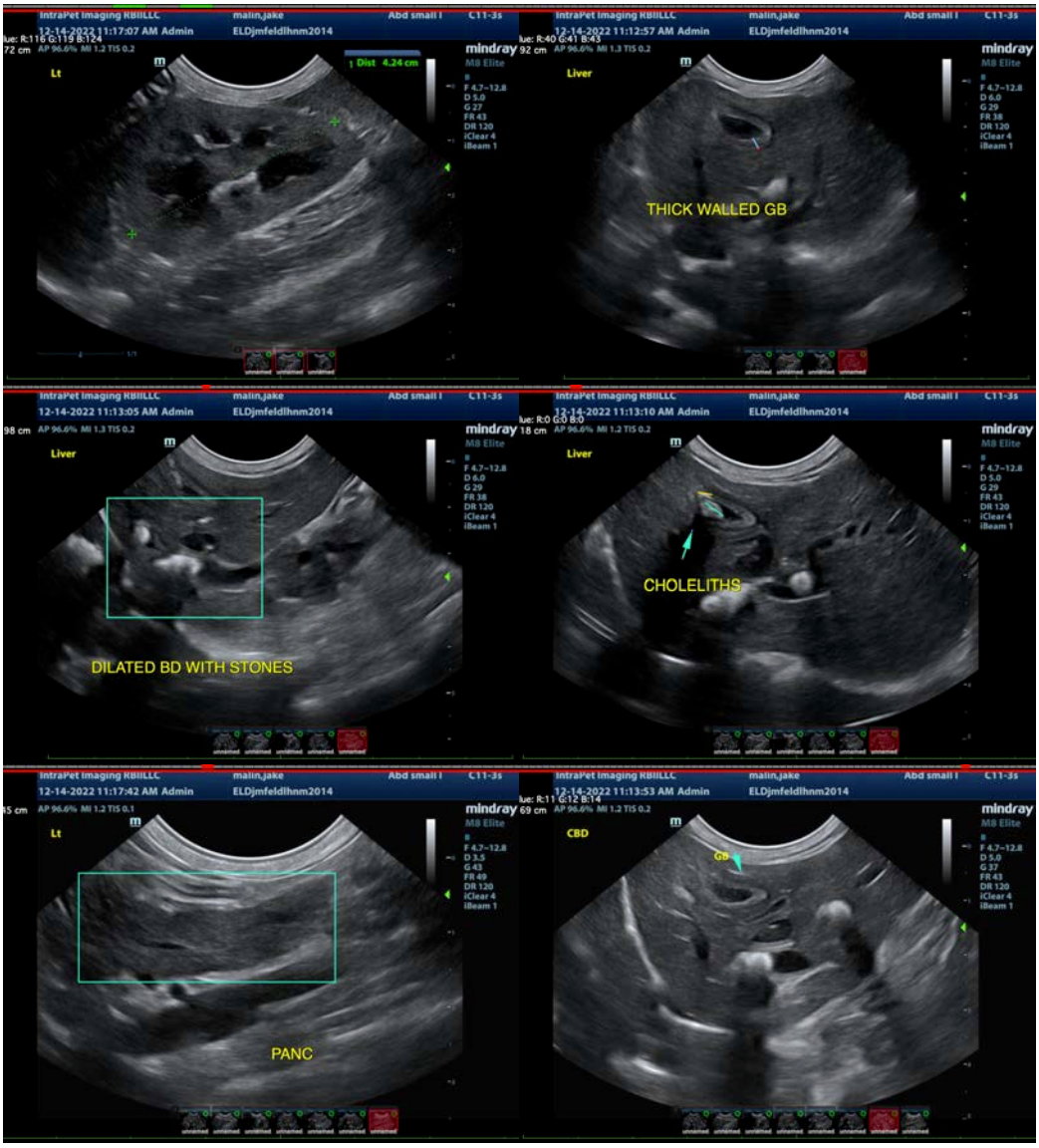
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is significant biliary disease present with a somewhat thickened gallbladder containing choleliths and a dilated cystic and common bile duct with intraluminal stones. Additionally, the liver is somewhat heterogeneous with intrahepatic biliary stones.

Initially, I would recommend aggressive medical therapy with IV fluids, pain medications, nausea medications, broad-spectrum antibiotics, and Ursodiol therapy with close continued monitoring of lab work and a repeat ultrasound in 12-48 hours, depending on how the patient is doing. If there is no response to medical management, consultation with a veterinary surgeon regarding the possibility of a cholecystoduodenostomy could be considered. The involvement of the pancreas is concerning for possible Triaditis. If surgical intervention is needed, recommend biopsies of the small intestine and liver. Additionally, if coagulation parameters are normal, you could consider a fine needle aspirate of the liver to rule out the possibility of round cell neoplasia.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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.

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