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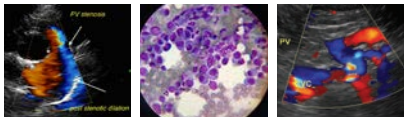

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

7/12/22

PATIENT

Bella Hammel

SPECIES

Feline

BREED

DLH

SEX

Spayed Female

AGE

11/1/12

WEIGHT

6.6 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Stephanie Pearce RDCS, RVT

HOSPITAL NAME

Perry Hall AH

REFERRING VET

Dr. Breidenbaugh

INVOICE

39397

PRESENTING CLINICAL SIGNS

Presented 7/6/22 for overgrooming, hair loss, and not acting herself. On PE P was pale and icteric, BAR, euhydrated, with normal temp and CRT. No discomfort on abdominal palpation, nor no mass effect. She did have two small dry and crusted skin lesions on her L forearm and had lost 0.9lbs. No change in appetite reported by owner, she continues to be a bit picky with her food. Recently on metronidazole for diarrhea and has not had consistently firm stool. BW preformed showed significantly elevated liver enzymes, normal RBC/platelets, and normal thyroid (results below)

Current Medications: Discontinued metronidazole 50mg BID (7/7/22)
Denamarin 90mg: 1 PO SID on empty stomach, Clavamox 62.5: 1 PO BID, Gabapentin: 100mg PO for sedation 2 hours before ultrasound
Lab Results: CBC: elevated MCH, no reticulocytes seen, neutropenia (2.519k), eosinopenia (0.063k), adequate platelets. CHEM: low BUN 13, elevated liver enzymes: ALT 434, AST 193, ALP 348, (GGT normal 5), T Bili- 1.8, Ucon Bili- 0.8, con bili 1.0. UA: cysto, usg 1.039, pH 6.0, trace protein, 2+ bilirubin, 2+ ammonium phosphate (6-20/hpf). T4: 2.3 WNL
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Dexdomitor/Torbugesic.
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 (3.52 cm). Overall echogenicity is slightly hyperechoic with poor 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 (3.58 cm). Overall echogenicity is slightly hyperechoic with poor 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 0.50 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 0.42 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 homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts 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 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 0.19 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 are some regions of the distal colon where wall thickness appears increased or at the upper limit of normal, measuring at 0.27, 0.23 cm with intact wall layering. Additionally, the colon appears subjectively short. Correlate these findings with abdominal radiographs. Findings would be most consistent with colitis, possible congenital short bowel.

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 pancreatitis.

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.

PRIMARY FINDINGS

- Hypoechoic, prominent pancreas with mildly hyperechoic mesentery surrounding – The pancreatic changes are most consistent with mild 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.

- Subjectively thickened distal colon/possible short colon – could be consistent with colitis, less likely infiltrative disease, and possible congenital short colon(?).

SECONDARY FINDINGS

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

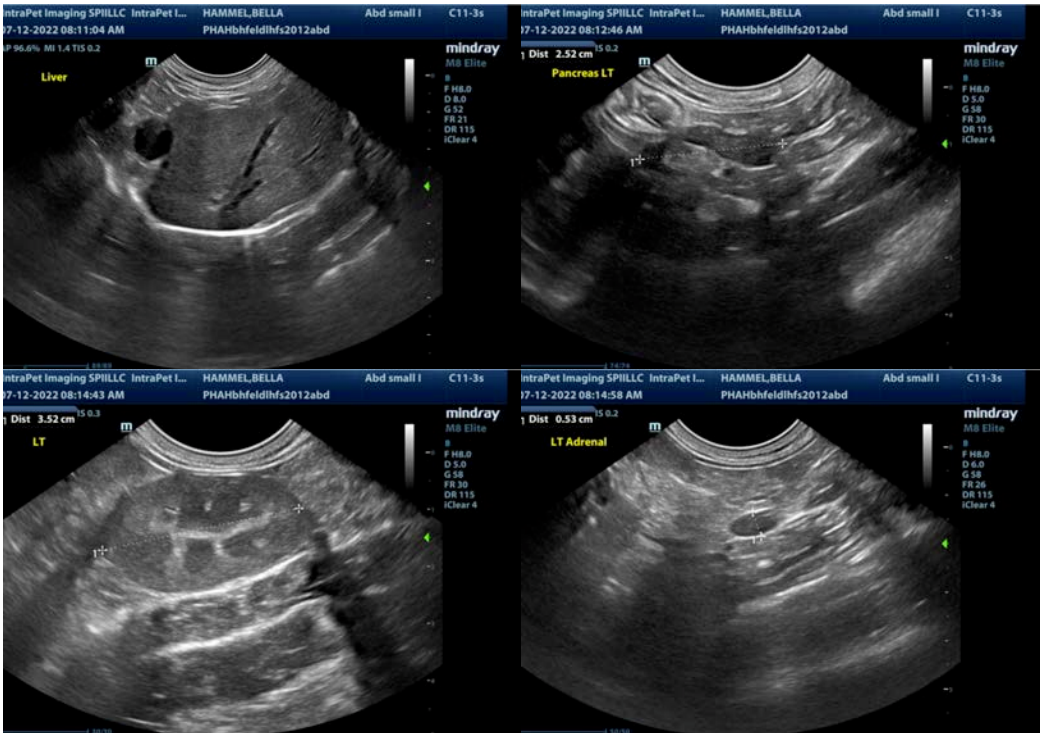
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

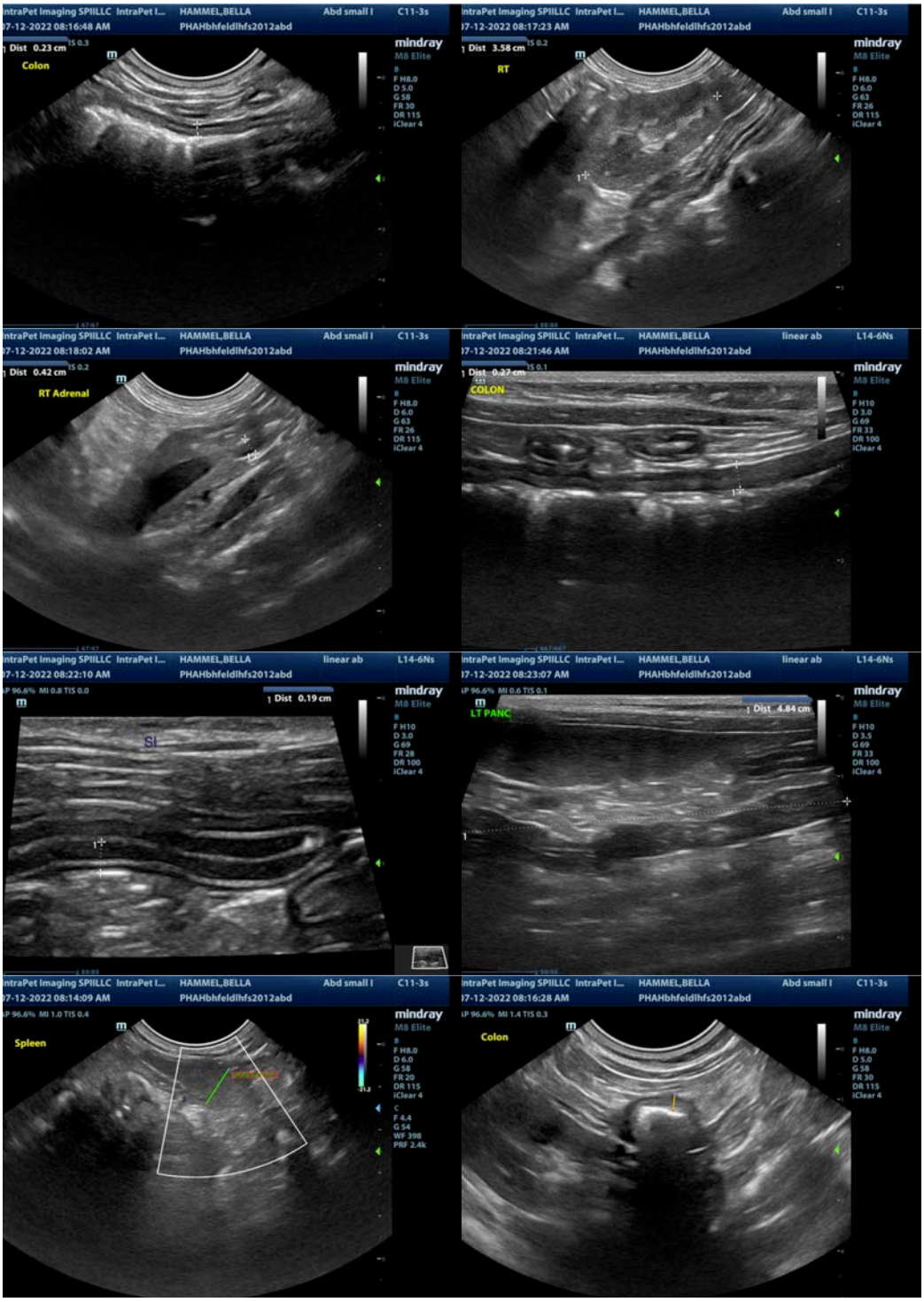
The ultrasonographic changes in the liver were relatively mild. Unfortunately, the sonographic changes do not always reflect the severity or cause of the hepatopathy. Systemic causes for cats with elevated liver enzymes include hyperthyroidism, DM, sepsis, toxicity (meds etc.),FIP, etc.) If these conditions 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 (not necessary if the bilirubin remains elevated).
- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- Consider liver biopsy with samples obtained for histopathology and culture
- If triaditis is suspected consider therapy for cholangiohepatitis, testing for pancreatitis and evaluation for IBD (GI panel to Texas A&M GI lab). This would be strongly recommended considering the changes observed in the pancreas.
- Consider a feeding tube if patient is not eating for a prolonged period of time

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

In some images, the colon appears somewhat thickened and short in appearance. The significance of these changes is uncertain, but there is a possible history of chronic diarrhea (large bowel diarrhea?). If symptoms persist, you could consider a colonoscopy. Correlate findings with abdominal radiographs to try and determine if the colon appears somewhat short. This is typically incidental, but can increase the possibility for diarrhea.

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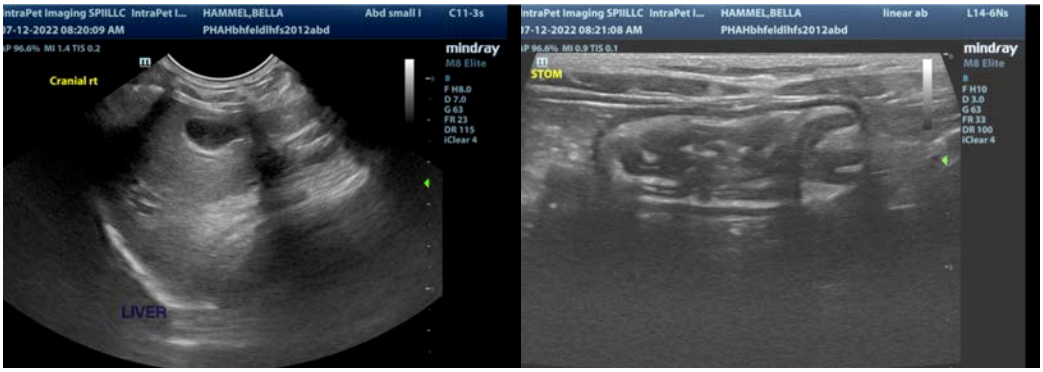

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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