**DATE PRESENTING CLINICAL SIGNS**

4/12/22 Presented on 3/29 with vomiting and was diagnosed with pancreatitis (abnormal fPL). Other findings on this date were basophilia and elevated ALT. The owner declined hospitalization at that time and the patient was resistant to performing other diagnostics at that time. She was treated conservatively with oral cerenia and responded well but then presented again for vomiting on 4/8/22- while still being BAR and having a good appetite this time.

PATIENT

Mona Wu

SPECIES

Feline

BREED

Devon Rex

SEX

Intact Female

AGE

7/29/21

WEIGHT

4.8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Andi Parkinson RDMS

HOSPITAL NAME

Perry Hall AH

REFERRING VET

Dr. Breidenbaugh

INVOICE

36809

Current Medications: Cerenia 8mg PO SID x 4 days (will likely still be taking at time of ultrasound). Will have gabapentin 50mg on board 12 and 2 hours prior to drop off time.
Lab Results: 3/29/22: CBC: basophilia (0.57) and false thrombocytopenia
CHEM: low creatinine (0.7) elevated ALT (262) with otherwise normal liver and kidney values. fPL: abnormal.
4/8/22: fPL: abnormal.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Dexdomitor
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 (3.29 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 (3.49 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 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 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 appears mildly hyperechoic and thickened, measuring 0.21 cm in thickness with a relatively smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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 0.25 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 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 moderate pancreatitis.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are prominent hypoechoic mesenteric lymph nodes visualized at the root of the mesentery measuring 0.70 cm and 0.85 cm in diameter. The omentum is of normal echogenicity.

Other

Portions of the uterus are visualized and appear normal.

ULTRASONOGRAPHIC FINDINGS

- Prominent, hypoechoic pancreas with surrounding hyperechoic mesentery – The pancreatic changes are most consistent with mild to 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.
- Mildly thickened/prominent gallbladder wall – This could be normal for this individual, or could indicate inflammation of the gallbladder wall (cholecystitis).
- Moderate/large amount of intraluminal gastric ingesta – Correlate with feedings history and abdominal radiographs. If adequately fasted then consider such differentials as delayed gastric emptying or a partial outflow tract obstruction (none visualized).
- Prominent mesenteric lymph nodes at the root of the mesentery – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No large mass lesions are observed. The pancreas is prominent and hypoechoic with a dilated pancreatic duct

and mild surrounding inflammation, most consistent with mild pancreatitis. The liver and the bile duct appear relatively normal, but there is a slightly thickened gallbladder wall, which could be an indicator of inflammation. The enlarged mesenteric lymph nodes could also be consistent with abdominal inflammation.

- Recommend a GI panel for a qualitative fPLI, TLI, cobalamin and folate to further evaluate the pancreas and small intestine.
- Consider continued therapy for pancreatitis.

In regards to the elevated ALT value:

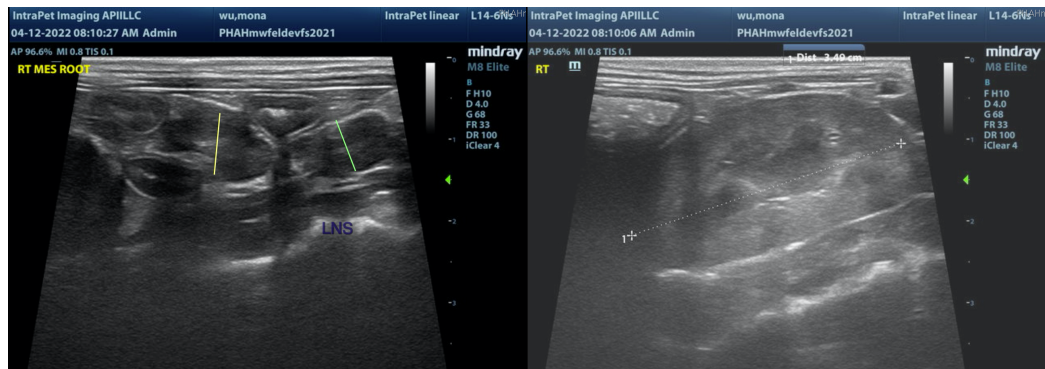
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc..
- Recommend thyroid evaluation (if not already done)
- If not already done, consider pre and post prandial bile acids to evaluate liver function (can skip if bilirubin is elevated)

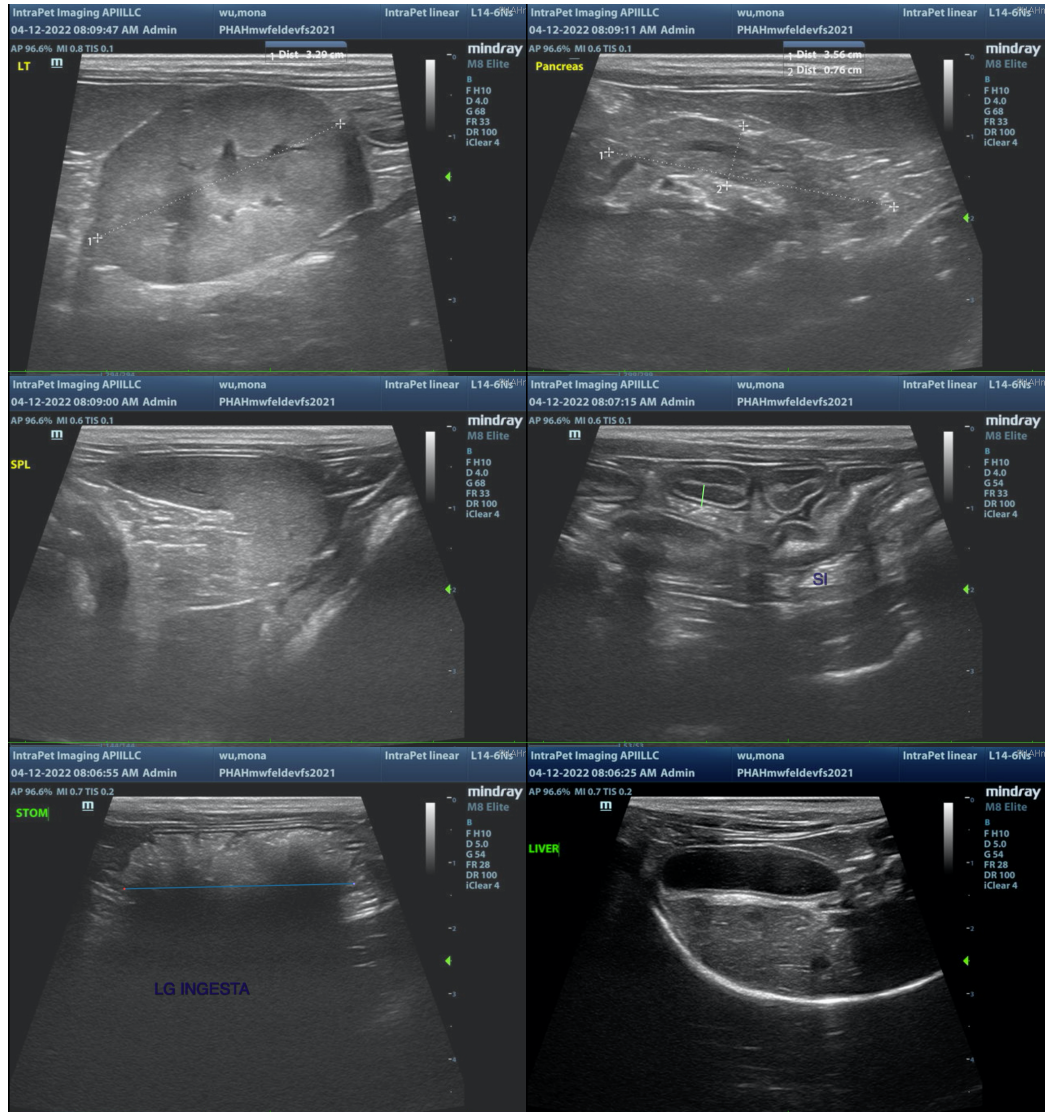
If treatment for pancreatitis is not causing improvement, or the liver values continue to rise, then consider:

- 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.
- Recheck gall bladder and bile duct in 48-72 hours to look for progressive distension.
- If triaditis is suspected consider therapy for cholangiohepatitis (fluids, antibiotics +/- steroids), testing for pancreatitis and evaluation for IBD (GI panel to Texas A&M GI lab)
- Consider a feeding tube if patient is not eating for a prolonged period of time

The stomach remains distended with ingesta despite adequate fasting for this procedure. Consider delayed gastric emptying or a partial outflow tract obstruction (none visualized).

If the ALT continues to rise, you could also consider a course of antibiotics and Ursodiol while monitoring the appearance of the gallbladder and bile duct. A fine needle aspirate of the mesenteric lymph nodes could also be considered if illness persists.





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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