IMAGING PERFORMED BY

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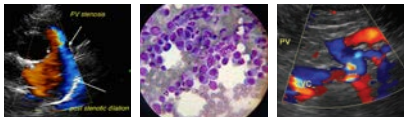

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DATE

3/7/23

PATIENT

Sable Warner

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

3/4/10

WEIGHT

7.7 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Honeygo AH

REFERRING VET

Dr. Wright

INVOICE

45724

PRESENTING CLINICAL SIGNS

Vomiting and weight loss.

Current Medications: Convenia and Cerenia inj given 1/19/23 and repeated Convenia on 3/2/23.
Lab Results: WNL other than elevated PSL.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

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 is normal in size (2.87 cm) but slightly irregular in shape, likely due to previous infarcts. 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 or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (3.72 cm) but slightly irregular in shape, likely due to previous infarcts. 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 or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.39 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 0.45 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 (0.56 cm), 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. There are occasional hypoechoic nodules visualized within the parenchyma of the liver. Examples measure 0.57 cm and 0.36 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a mild amount of non-organized echogenic debris. The bile duct is visualized and appears slightly prominent and tortuous. Proximally the bile duct appears thickened with intraluminal debris,distally at the level of the duodenum it appears more normal. In the cranial abdomen,

there are numerous dilated tubular structures visualized. These could represent pancreatic duct or possibly bile duct, but I cannot definitively follow them. I suspect pathology in both the bile duct and pancreatic duct.

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. 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. Jejunum wall measures 0.24 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 prominent and mottled compared to the surrounding isoechoic mesentery. There is a large rounded anechoic structure in the cranial abdomen that appears associated with the pancreas. Most consistent with a pancreatic duct ectasia, less likely a pancreatic cyst measuring 0.93 cm x 1.09 cm. There is some echogenic material visualized in the dilated structure, possibly consistent with debris or abnormal soft tissue.. 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 are visible/prominent (but not enlarged) mesenteric lymph nodes measuring 0.31, 0.23, and 0.23 cm. The omentum is of normal echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Decreased corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

- Prominent, mottled pancreas with a prominent pancreatic duct with a focal dilation (ectasia)– The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation. The abnormal dilated pancreatic duct could be inflammatory but there is concern about possible tissue density within the duct (abnormal tissue-masses?)

- Heterogeneous liver with occasional hypoechoic nodules – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy. The significance of the hypoechoic nodules is unknown but is concerning. These are likely in a difficult place to aspirate.

- Mild gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting. Incidental gall bladder debris is less common in cats. Additionally, the bile duct appears slightly prominent and tortuous with intraluminal debris/tissue.

- Prominent muscularis layer of the small intestine – The small intestinal wall changes could be consistent with an underlying inflammatory process. These types of changes can sometimes be seen in normal older cats. Correlate with clinical signs.

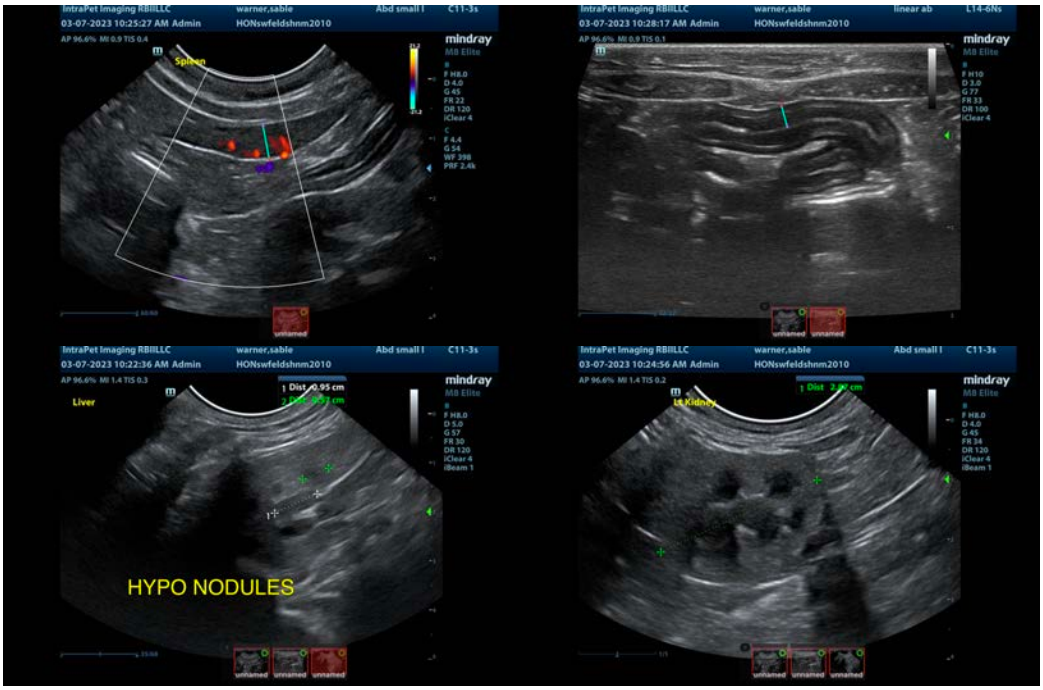
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

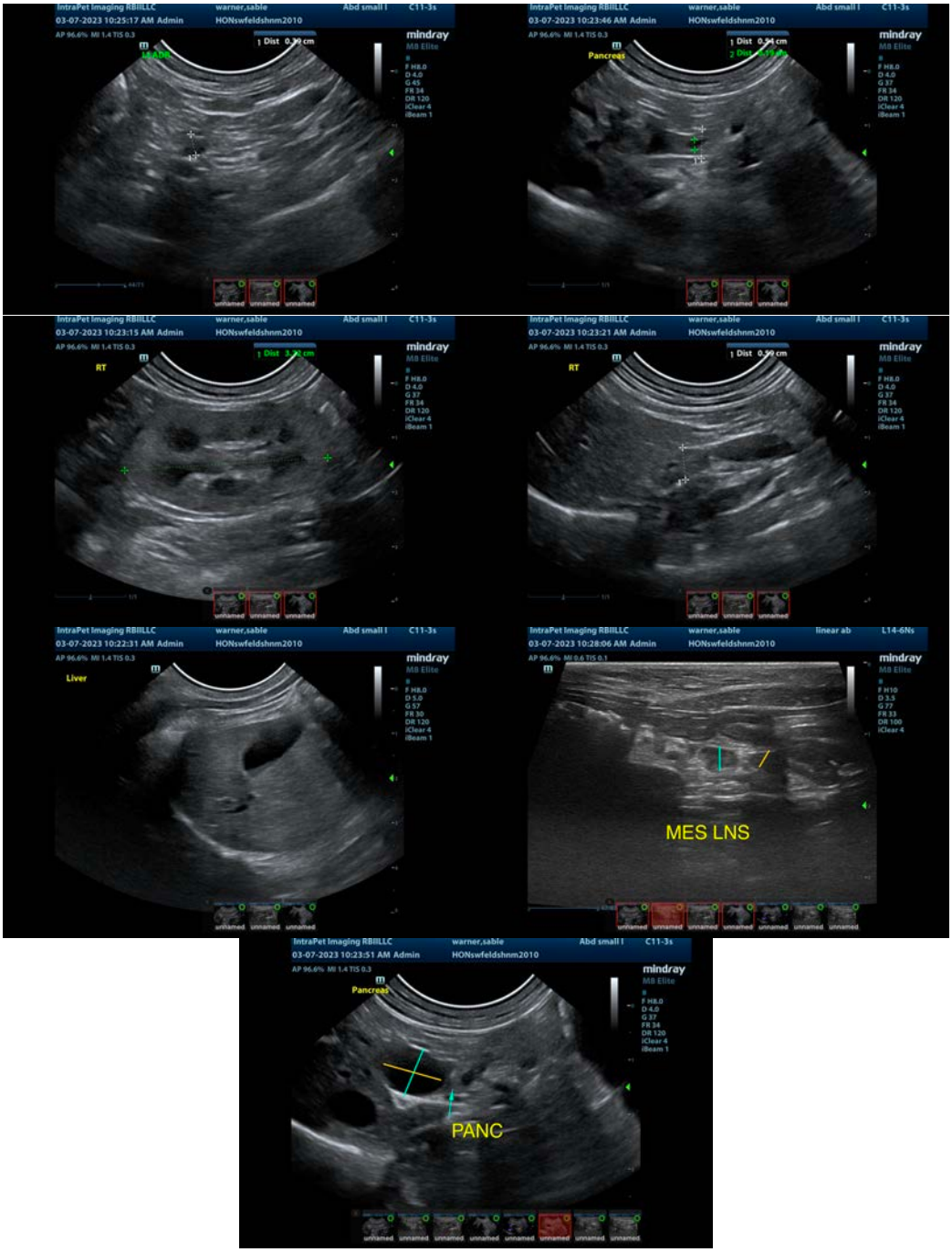
The right cranial abdomen is busy in this individual,with numerous prominent tubular structures and a prominent pancreas. Additionally, there is a large hypoechoic structure, which I suspect is pancreatic in origin (ectatic pancreatic duct, less likely cyst). The pancreas does not appear overtly inflamed but is prominent. These changes could be consistent with mild chronic inflammation or a previous episode of inflammation. But the echogenic debris in the pancreatic duct is concerning and there is the possibility of abnormal tissue density (mass effect) in this region.

Additionally, the bowel appears somewhat “ropey”. This combined with the hepatic changes could be consistent with Triaditis, but an underlying neoplastic process is also a concern (biliary carcinoma in biliary and pancreatic ducts??) Correlate these findings with bloodwork (values were not included in the history) to try and determine the likelihood of a biliary obstruction, pancreatitis, etc. Additionally, there are some hypoechoic nodules in the liver. The significance of this is uncertain, but this is somewhat concerning.

Initially, I would recommend treatment for cholangiohepatitis, pancreatitis while performing additional diagnostics such as a GI panel to Texas A&M for a qualitative fPLI, TLI, cobalamin and folate, looking for evidence of underlying GI disease, pancreatic disease, etc., and 3-view thoracic radiographs. Additionally, if coagulation parameters are normal, a fine needle aspirate of the liver is strongly recommended. As surgical biopsies would be necessary to further evaluate the biliary/pancreatic changes.

If lab work does not improve or continues to worsen, a contrast CT scan could be considered to further investigate some of the abnormal structures visualized in the right cranial abdomen to rule out a biliary obstruction. As a last resort, biopsies of the liver, small intestine, and pancreas may need to be considered.





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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