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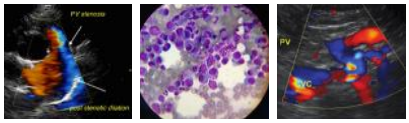

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DATE

10/22/21

PATIENT

Oma Lilly Barrett

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

8/11/2004

WEIGHT

5.8 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Timonium AH

REFERRING VET

Dr. Montessi

INVOICE

13989

PRESENTING CLINICAL SIGNS

History: Hyperthyroid, chronic V+, recent hx of multiple, mineralized opacities within the abdomen. Radiology review of images reports opacities are within the SI. No V+ for 48 hours, good appetite.

Current Medications: Maropitant @ 1mg/kg 3pm 10/21, Omeprazole 2mg q12, Methimazole (unk dose), Gabapentin 100mg @ 10a.
Lab Results: 10/21/21: CBC- Leukocytosis (mild) with moderate neutrophilia (12.7k). Chem- amylase 1558 (<1200) precision PSL WNL; CPK 816 (<529). UA- usg 1.045; pH 5.5 1+ protein; RBCs 4-10 (cysto).
Radiographs: Radiology review reports opacities are within the SI.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: Sedation not required for scan.
Stat Report: STAT report not requested by the veterinarian.

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 2.0 cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (3.61 cm). Overall echogenicity is slightly hyperechoic with mildly decreased corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There are non-obstructive nephroliths, measuring 0.29 cm, 0.32 cm. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size 2.14 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 are normal/small non-obstructive nephroliths. There is no evidence of pyelectasia, 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 large 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. The left side of the liver consists of several large cystic structures, measuring 2.51 cm, 1.47 cm and 1.3 cm. Some smaller cysts are also present. This lesion is most consistent with a cystadenoma.

The gallbladder is moderately dilated with anechoic echogenic debris. The wall is slightly thickened and irregular, measuring 0.19 cm. The cystic and common bile duct are dilated and tortuous, measuring at 0.39 cm. No obvious obstruction is visualized proximally, but as it enters the area of the duodenal papilla there is a lot of mineralization where it joins with the pancreatic duct. It is possible that the stones within the pancreatic duct are obstructing the bile duct or that there are some stones distally in the common bile duct.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36 cm 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 and the jejunum measured as normal (between 0.27 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, prominent and hypoechoic as compared to the surrounding isoechoic mesentery. There are no focal nodules or cystic lesions evident, but the pancreatic duct is severely dilated at 0.79 cm and is filled with (too numerous to count) shadowing stones, the largest of which measures approximately 0.61 cm. These mineralizations line up to the level of the duodenal papilla where they join with the bile duct.

Free Abdomen

No free fluid is noted. There is a significant mesenteric lymphadenopathy present with a mesenteric lymph node measuring 0.82 cm x 1.68 cm. The omentum is generally of normal echogenicity but appears hypoechoic in that region around the pancreas.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Prominent hypoechoic pancreas with numerous stones within a severely dilated pancreatic duct
- Mildly thickened gallbladder wall with dilated cystic and common bile duct- Dilation of the common bile duct could be consistent with a functional obstruction (i.e., primary hepatic disease resulting in hepatocellular swelling) or with an extrahepatic bile duct obstruction (i.e., choledocholith, bile duct tumor, pancreatic disease, other). A focal obstruction of the bile duct is not observed, but it is suspected that at the level of the duodenal papilla there is either a stone or obstruction due to the pancreatic duct lesions.
- Mesenteric lymphadenopathy- The prominent mesenteric lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

- Large cystic region to the liver- this lesion is most consistent with a biliary cystadenoma (benign lesion), but other possibilities exist. These sometimes require removal if large enough to cause clinical signs.

Secondary Findings

- Decreased corticomedullary distinction with non-obstructive nephroliths in both kidneys- Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. The hyperechoic mineralized foci observed at the corticomedullary junction of the left and right kidney are consistent with small, non-obstructive nephroliths.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

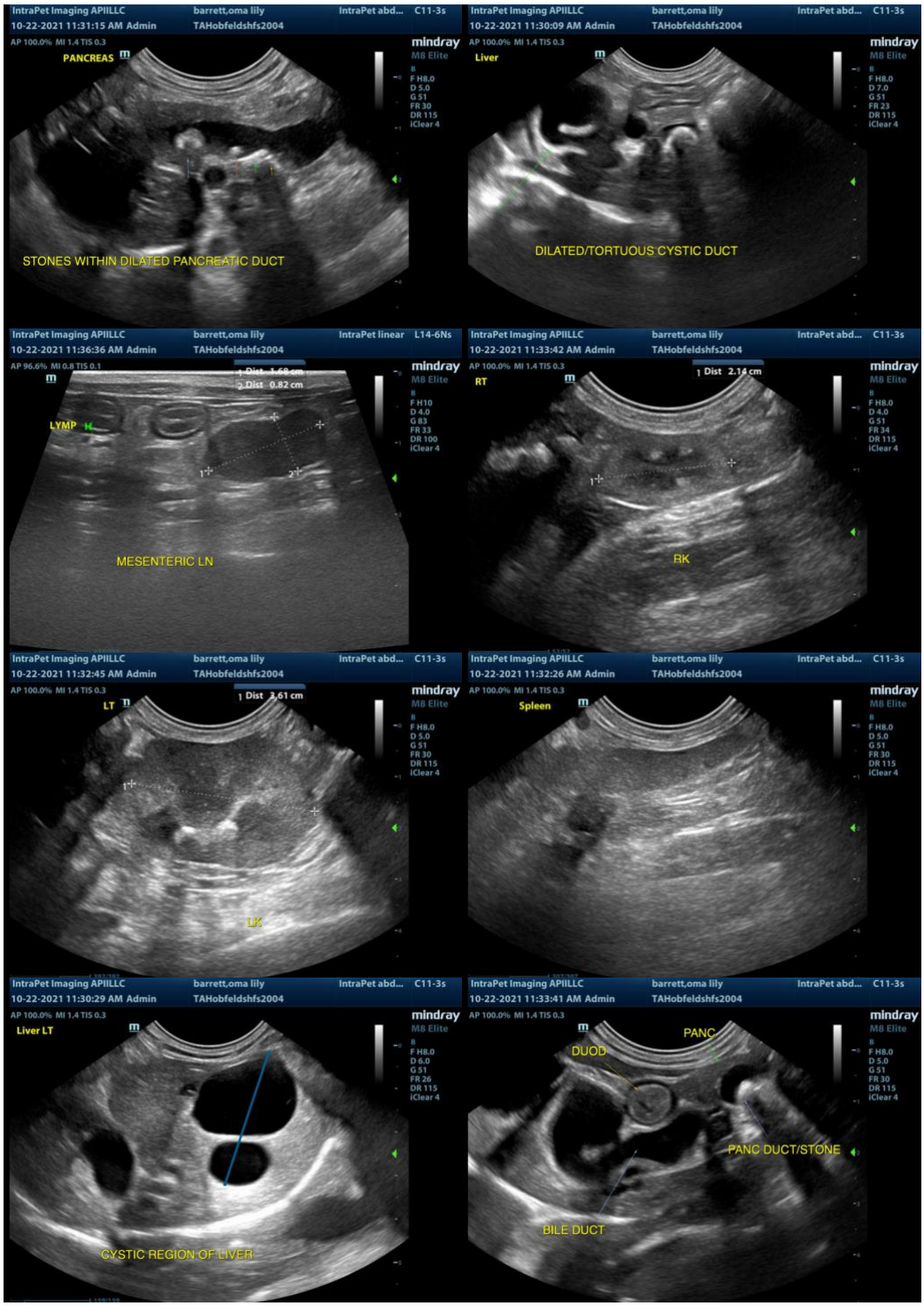
There is severe pancreatic disease present with (too numerous to count) stones in the pancreatic duct and severe dilation. This is typically associated with pancreatic and small intestinal disease. Additionally, there is dilation of the common and cystic bile ducts which could be indicative of cholecystitis and stones or an obstruction at the level of the duodenal papilla.

Options moving forward include:

- Recommend GI panel (Texas A & M University) with quantitative fPLI, TLI, cobalamin and folate to look for evidence of underlying intestinal disease and to assess the pancreas.
- Recommend a fine needle aspirate of the enlarged mesenteric lymph node.
- Recommend three view thoracic radiographs to look for evidence of intrathoracic disease.
- Recommend medical therapy with antibiotics, antinausea medications and pain medications.

From this point, options include either a more aggressive path, which would include surgery to biopsy liver, pancreas to sample bile for culture and cytology and to better evaluate the pancreatic and bile duct to make sure there is no mass/obstruction and to determine if rerouting is indicated. Much of this decision would depend on current blood work and current health status and clinical picture of this patient. A more conservative route would include treatment for pancreatitis, starting ursodiol, a fine needle aspirate of liver +/- pancreas and close continued monitoring with ultrasound to look for evidence of progressive obstruction versus improvement/stable disease. If the patient is not eating, consider a feeding tube and recheck ultrasound in approximately 1 week (sooner if not doing well).

The large cystic liver lesion is most consistent with a large cystadenoma, although, other differentials exist. Considering the biliary and pancreatic disease present, I would continue to monitor this lesion for now.



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.

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