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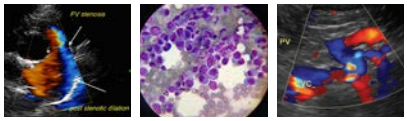

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

10/12/22

PATIENT

Shawn Beller

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

12/12/12

WEIGHT

12.09 Pounds

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

41980

PRESENTING CLINICAL SIGNS

Diabetic, not eating for 2 days, vomiting, no insulin given

Current Medications: Cerenia 0.55 mL SQ, Mirataz: place 1.5 inch strip on pinna SID, Gabapentin 50 mg: 1 tab SID-BID PO #20
Lab Results: CBC: neutropenia (inflammation vs infectious vs other)
Chem 17, lytes , T4/SDMA: BUN 42, ALT 161
Date of Previous IntraPet Ultrasound: No previous.
Sedation: IM sedation.
Stat Report: STAT approved/requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with mild primarily suspended echogenic debris and some dependent shadowing/sandy debris present. 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 calculi. Echogenic debris of this type can be associated with small crystals, sandy debris or small calculi. Correlate findings with abdominal radiographs, urinalysis and culture.

The left kidney has a normal shape and size (3.88 cm). Overall echogenicity is normal with adequate 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 (4.49 cm). Overall echogenicity is normal with adequate 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 left adrenal gland is normal/borderline large measuring 0.57 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 borderline large, measuring 0.53 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 large and irregular. The blood flow through the hilus and splenic parenchyma appears normal. There are numerous moderate sized, hyperechoic discrete nodules throughout the parenchyma, varying in size from 0.25-1.0 cm. Additionally, there are larger mass lesions, one measures 2.41 cm x 0.95 cm, and towards the tail of the spleen there are some very large, space occupying, hyperechoic mass lesions, the largest of which measures 13.23 cm x 8.18 cm and occupies a large section of the caudal abdomen.

Liver

The liver is large in size, and hypoechoic with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The intrahepatic bile ducts appear diffusely dilated. No focal nodules or cystic lesions are observed.

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 moderate amount of non-organized echogenic debris. The bile duct is diffusely dilated and tortuous, in some areas appearing to have a thick wall. Mid bile duct it measures 0.39 cm in diameter, but the dilation progresses to the level of the duodenal papilla, where it measures at 0.65 cm. There is hyperechoic tissue/debris at the duodenal papilla, which could reflect a mass lesion, swelling, debris, etc. This area of the duodenal papilla measures 0.51 cm x 0.84 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. Duodenum wall measured 0.26 cm. Jejunum wall measures 0.21 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. The pancreatic duct is dilated and prominent, measuring 0.38 cm.

Free Abdomen

There is a small amount of free abdominal fluid. No lymphadenopathy. The omentum is hyperechoic around the pancreas in the cranial abdomen.

Other

A brief view of the heart was submitted. No significant pericardial effusion was seen.

ULTRASONOGRAPHIC FINDINGS

- Echogenic sandy debris within the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.
- Borderline large adrenal glands – This could be consistent with the stress of chronic illness or an underlying endocrinopathy.
- Too numerous to count, variably sized, discrete hyperechoic splenic nodules with a very large hyperechoic caudal splenic mass.
- Hypoechoic prominent pancreas surrounded by hyperechoic mesentery with a severely dilated pancreatic duct – 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.
- Hypoechoic, heterogeneous liver with dilated intrahepatic bile ducts – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative

neoplasia, lipidosis or other hepatopathy.

- Moderately distended gallbladder with a progressively dilated tortuous bile duct ending at a prominent duodenal papilla – The findings are most consistent with a biliary obstruction. Findings could be consistent with a mass lesion, swelling, or inspissated debris.

- Small amount of free abdominal fluid

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There appears to be a bile duct obstruction present. Based on the severity and extent of the dilated of both the pancreatic duct and the bile duct, I suspect this is somewhat chronic. I do not see any obvious stones, and the obstruction seems to extend to the duodenal papilla, so there is concern there could be an obstructive process there such as a mass or inspissated debris, etc.

There are numerous discrete hyperechoic nodules throughout the spleen. There is a very large hyperechoic caudal abdominal mass effect, which I suspect is arising from the spleen as well. These hyperechoic lesions could represent benign lesions, but the sheer number and size warrant concern, and I would consider a splenectomy. At the same time, I would evaluate the region of the duodenal papilla and the bile duct. Recommend referral to a veterinary surgeon. Prior to this, you could consider a fine needle aspirate of the liver and splenic nodules (provided coagulation parameters are normal) to rule out round cell neoplasia, which would most effectively be treated by chemotherapy rather than surgery.

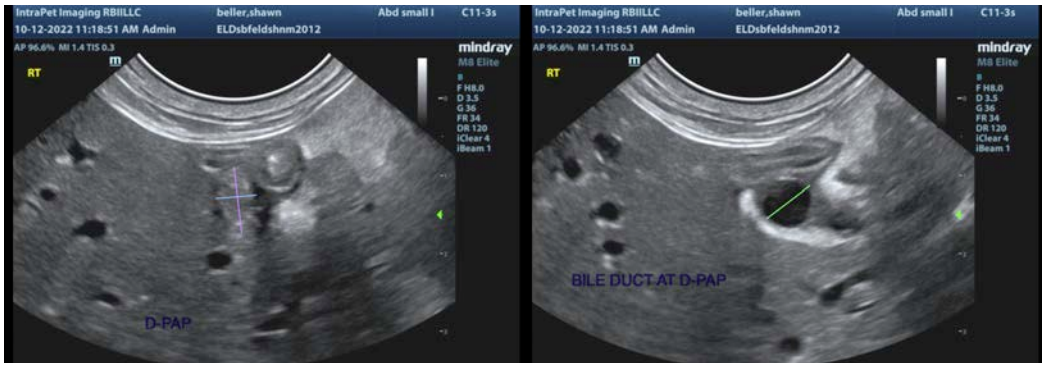
The pancreas is hypoechoic with a dilated pancreatic duct. The pancreatic duct is likely obstructed at the duodenal papilla. The pancreas appears inflamed. Recommend treatment for pancreatitis. Additionally, there could be infiltrative disease affecting the pancreas.

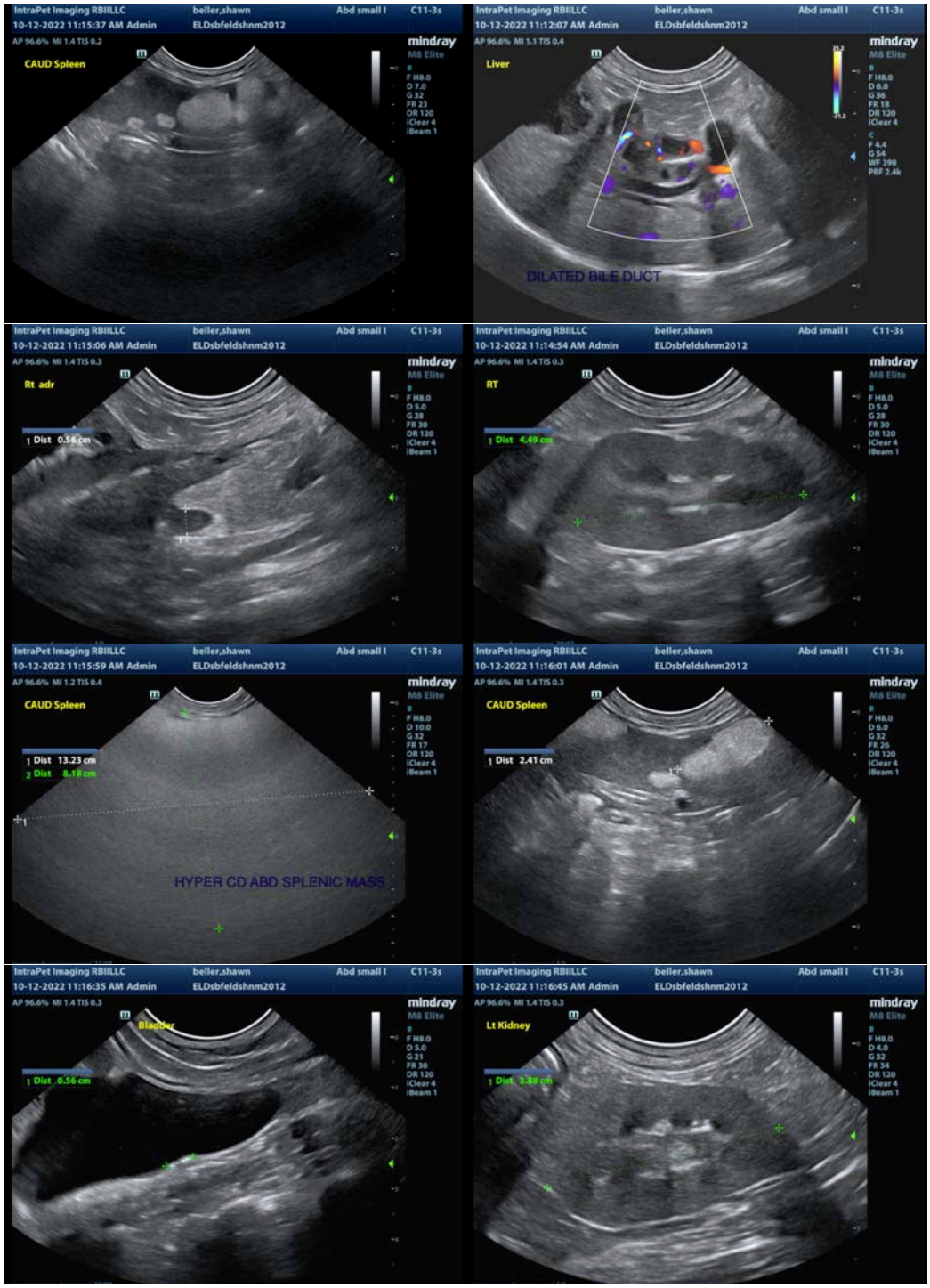
The changes in the liver could be consistent with a diabetic hepatopathy or round cell neoplasia as primary differentials. The dilated intrahepatic ducts or a consequence of the biliary obstruction.

Both adrenal glands are prominent. This could be due to the stress of chronic illness or due to an endocrinopathy. Recommend revisiting this issue once the biliary and splenic issues are addressed.

There is sandy debris visualized in the urinary bladder, recommend a urinalysis and culture.

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

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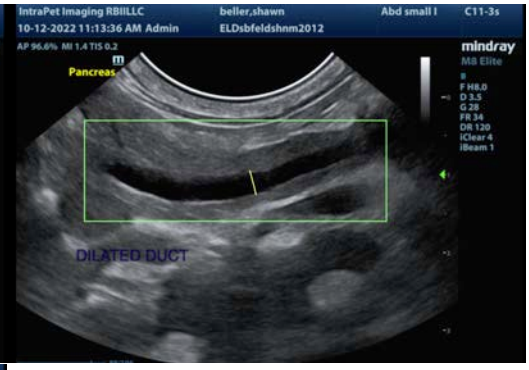

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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