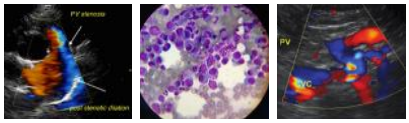
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
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DATE

3/28/2022

PATIENT

Jenny Jackson

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

3/25/2014

WEIGHT

7.5 lbs

INTERPRETED BY

Andrea Nicastro, DMV, Diplomate DACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Everhart VH

REFERRING VET

Dr. Kerr

INVOICE

10624

PRESENTING CLINICAL SIGNS

Presented with lethargy, decreased appetite, decreased urination and icterus on 3/25/22 after the owner brought in from outside. PE reveals icteric pinna, sclera, mucous membranes and abdomen with cranial abdomenomegaly. Jenny also has a grade 2/6 sternal systolic murmur.

Current Medications: Cerenia 1mg/kg IV q24h, Ampicillin 22mg/kg IV q8-12h, Metronidazole 15mg/kg IV q12h.
Lab Results: ALP 1138 (14-111), ALT 651 (12-130), Tbili 9.3 (0-0.9), WBC 5.01 (5.5-19.5), pro BNP normal.
Radiographs: No obvious masses or effusions.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Pearce RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended. A scant amount of suspended echogenic debris is observed within the lumen. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal in size (3.52 cm in length) with a slightly irregular shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal in size (3.68 cm in length) with a normal shape and architecture and smooth peripheral contours. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.37 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

The region of the right adrenal gland is evaluated. No obvious pathology is observed.

Spleen

The spleen is normal in size (0.94 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly heterogenous in appearance. No distinct focal lesions are observed.

Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The gall bladder lumen is distended. The wall is normal in thickness and appears to be intact. A moderate amount of suspended echogenic debris is observed within the lumen. The mesentery effacing the serosal surface is hyperechoic. Trace free fluid is seen adjacent to the gall bladder wall. The cystic and common bile ducts are diffusely thickened, up to 0.32 cm. The common bile duct lumen is not overtly distended (up to 0.24 cm). A 0.19 cm hyperechoic focus is observed within the common bile duct lumen, approximately 0.50 to 1.00 cm from the duodenal papilla. The duodenal papilla is also thickened (0.47 cm in width).

Gastrointestinal

The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is diffusely thickened. There is disruption in the normal 1:3 muscularis: mucosal ratio, with a >1: 1 ratio in several segments. In one segment of small intestine in the caudal abdomen, the wall is moderately to severely thickened (up to 0.92 cm) and slightly irregular with suspected loss of the normal layering pattern. The mesentery effacing the serosal surface is adhered and hyperechoic. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The pancreas is diffusely prominent in size with minimal deviations from the normal peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat and mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated. Surrounding mesentery is hyperechoic.

Free Abdomen

A small amount of free fluid is observed. The abdominal lymph nodes are normal/not visible.

Other

A brief echocardiogram reveals suspected trace pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The focally thickened segment in the caudal abdomen is concerning for emerging neoplasia (i.e., lymphoma). However, a severe inflammatory process (i.e., inflammatory bowel disease), cannot be excluded. Differentials for the diffuse small intestinal changes are the same.
- The pancreatic changes are suggestive of chronic pancreatitis with age-related remodeling +/- fibrosis.
- The common bile duct changes could be consistent with cholangiohepatitis, infiltrative neoplasia (i.e., adenocarcinoma) +/- concurrent benign age-related hyperplasia.
- Gall bladder debris. The gall bladder wall appears intact at this time, but a small rupture/leakage, cannot be completely excluded. Regional peritonitis is present.

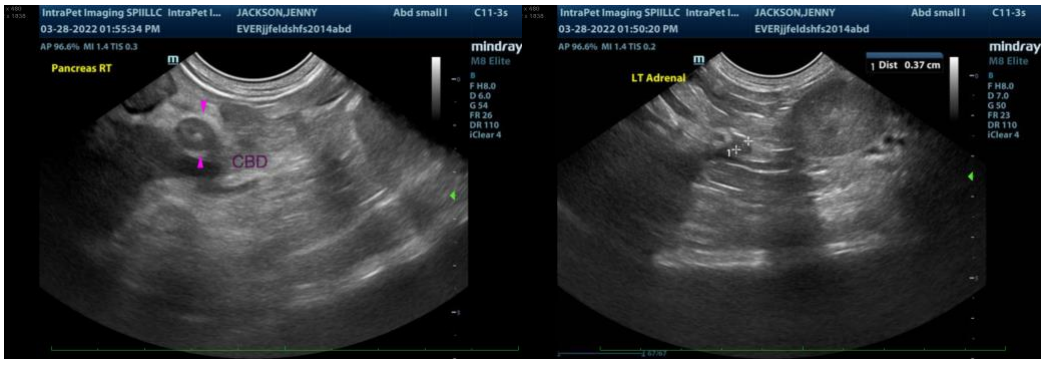
- The diffuse hepatic parenchyma changes could be consistent with an inflammatory hepatopathy (i.e., bacterial cholangiohepatitis, lymphoplasmacytic hepatitis), infiltrative neoplasia, vacuolar hepatopathy (i.e., secondary to hepatic lipidosis), other.
- The multifocal areas of peritonitis are likely secondary to gall bladder, pancreatic, and bowel pathology.

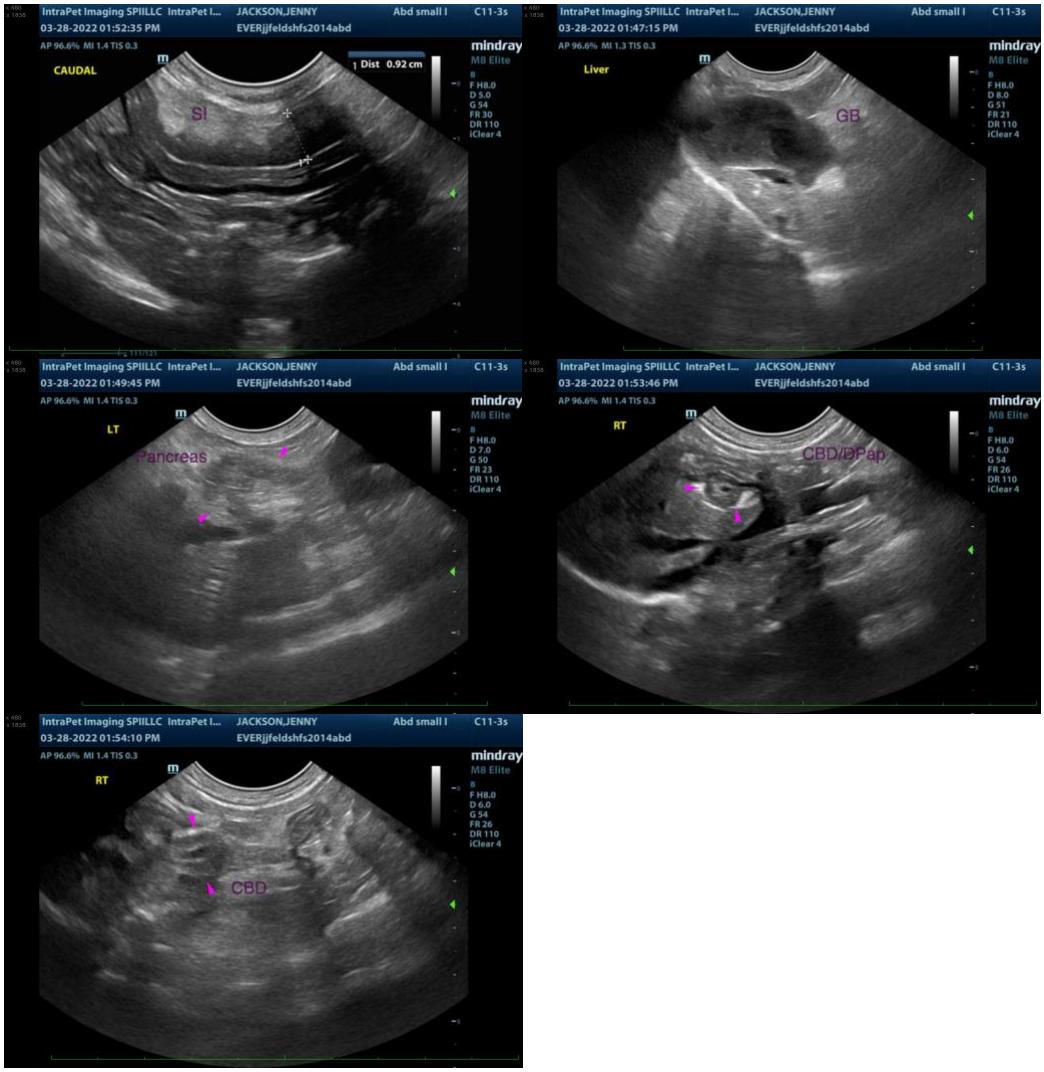
Secondary Findings

- Bilateral age-related renal changes with dystrophic mineralization
- Suspected trace pericardial effusion

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Three-view thoracic radiographs are recommended to assess cardiopulmonary status. If clotting status is appropriate, consider fine-needle aspirates of the liver and the thickened segment of bowel in the caudal abdomen. Alternatively, an exploratory surgery with evaluation of the gall bladder and bile ducts and biopsies of the liver and gastrointestinal tract can be considered. If surgery is pursued, aerobic and anaerobic bile cultures should be obtained.
- A GI panel (i.e., serum cobalamin, folate, TLI and PLI) is also recommended.
- Fine-needle aspirate of the free abdominal fluid with submission for analysis, cytology +/- aerobic and anaerobic cultures is recommended if the fluid is accessible.
- While awaiting test results, empirical treatment for bacterial cholangiohepatitis/cholangitis/cholecystitis/pancreatitis/hepatic lipidosis is recommended including fluid therapy, gastric protectants, antiemetics, broad-spectrum antibiotics and nutritional support. Also consider placement of a temporary feeding tube (i.e., esophagostomy), to prevent/treat hepatic lipidosis.





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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