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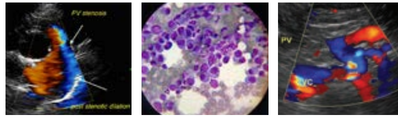

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE
4/15/22

PATIENT
Soldier Gravatt

SPECIES
Feline

BREED
DSH

SEX
Neutered Male

AGE
4/16/06

WEIGHT
13 Pounds

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Rachel Brilhart RDMS

HOSPITAL NAME
Madonna Vet Clinic

REFERRING VET
Dr. Brockett

INVOICE
36954

PRESENTING CLINICAL SIGNS

Decreased appetite, losing weight, lethargic. Soldier is a long term diabetic.

Current Medications: Convenia given on 4/11/22. On 1 unit of insulin (Novolin) BID. Takes ½ baby aspirin twice a week.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately/well distended with anechoic contents. The wall is smooth and regular. No abnormalities are present with the trigone. An evaluation of the urethra was prevented by gas and stool within the colon. There is no evidence of cystoliths, polyps or a mass. A trivial amount of free floating sediment is present, however, obvious signs of cystitis are not noted.

The **left** kidney measures 4.32 cm (3.80-4.40 cm). The capsule is very mildly bossilated. The cortex is mildly hyperechoic and a mild loss of the normal definition of the cortico-medullary junction is present. Mild mineralizations of the diverticulae are present, without evidence of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 3.91 cm (3.80-4.40 cm). The capsule is very mildly bossilated. The cortex is mildly hyperechoic and a mild to moderate loss of the normal definition of the cortico-medullary junction is present. Mild mineralizations of the diverticulae are present, without evidence of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation: No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.40 cm in diameter. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland measures 0.38 cm in diameter. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Spleen

The spleen is within normal limits in size 8.7 mm (normal = 10 mm), echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

There are no obvious signs of hepatomegaly and its borders are smooth, but vary between sharp to mildly rounded. The liver's echotexture is homogeneous. It is hyperechoic, i.e. it is isoechoic to the falciform fat. No focal nodules or cystic lesions are observed and the hepatic vessels visualized do not show any abnormalities or congestion. Mild to moderate perivascular cuffing consistent with myelolipomas is observed, which is not considered clinically significant.

The gallbladder wall is within normal limits in thickness and echogenicity. There is no evidence of echogenic material within the GB or edema surrounding it. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

Gastrointestinal

The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

A few segments of the ileum is at the high end of the normal reference range, or mildly thicker than normal (0.27 cm; 0.28 cm; 0.33 cm). Although the definition of the wall layers is well preserved, mild fogging of the mucosa and muscularis of the small intestines are present. The muscularis is also thicker than normal. The ileo-cecal-colic junction and the surrounding mesentery are unremarkable. Abnormally dilated loops of bowel are not observed.

A large amount of gas is present in the transverse colon. The colonic wall is not thickened and mural detail is considered normal. Formed stools are present within the colon.

No obvious abnormalities are observed with its peristalsis. An obvious mass is not visualized in the gastrointestinal tract.

Pancreas

Both limbs are moderately enlarged and have mildly irregular contours. They are moderately heterogeneous. Ill-defined areas of hypoechogenicity are present in addition to punctate hyperechoic foci throughout the parenchyma as well as hypoechoic nodules of variable size. The surrounding mesenteric fat is mildly hyperechoic. Furthermore, the sonographer commented on Soldier being painful due to pressure of the ultrasound probe (positive Murphy sign).

Other

Lymph nodes: No abnormalities are observed

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- An active pancreatitis is suspected based on the changes observed with both limbs of the pancreas, the mildly hyperechoic mesentery surrounding the limbs, as well as Soldier's discomfort and clinical signs. The multiple hypoechoic nodules dispersed throughout the parenchyma are suggestive of nodular hyperplasia, while the hyperechoic regions are suggestive of fibrosis secondary to age-related changes, possible previous episodes of pancreatitis, as well as amyloid deposition. Overt signs of neoplasia are not noted.

- The intestinal changes may occur due to inflammation secondary to inflammatory bowel disease. Infiltrative disease, such as lymphoma or other round cell tumour remains possible, but is considered less likely. Although obvious signs of neoplasia are not evident, biopsies would be required to exclude such a diagnosis with certainty.

- The diffuse hyperechogenicity of the liver is most likely secondary to deposition of fat secondary due to diabetes mellitus, however, hepatic lipidosis secondary to hyporexia may be contributing to the hyperechogenicity. Cholangitis/cholangiohepatitis, with or without a secondary bacterial infection, cannot be excluded, particularly in light of the changes observed with the pancreas and the intestinal tract.

- “Triaditis” cannot be excluded due to the concurrent changes observed with the pancreas, liver and gastrointestinal tract.

- Mild to moderate degenerative changes of both kidneys, which are suggestive of age related degeneration. There are no obvious signs of pyelonephritis, however, the latter cannot be excluded based on the absence of sonographic abnormalities, particularly in diabetic cats.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A TLI, serum cobalamin, and folate, +/- spec fPL are recommended to assess for underlying maldigestion and malabsorption disease, as many diabetic cats may also suffer from exocrine pancreatic insufficiency. It is best to wait until signs of pancreatitis have resolved to avoid obtaining a false negative TLI result.

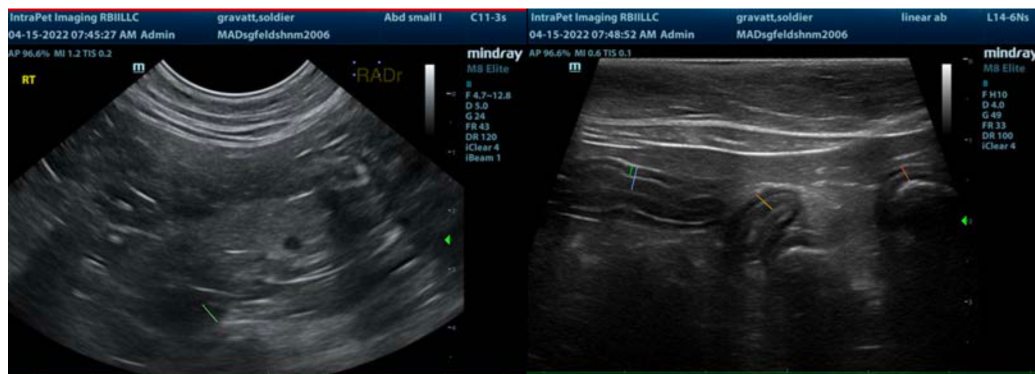
A urinalysis and urine culture and sensitivity are recommended to exclude a urinary tract infection and possible pyelonephritis as a result of immunosuppression caused by diabetes mellitus.

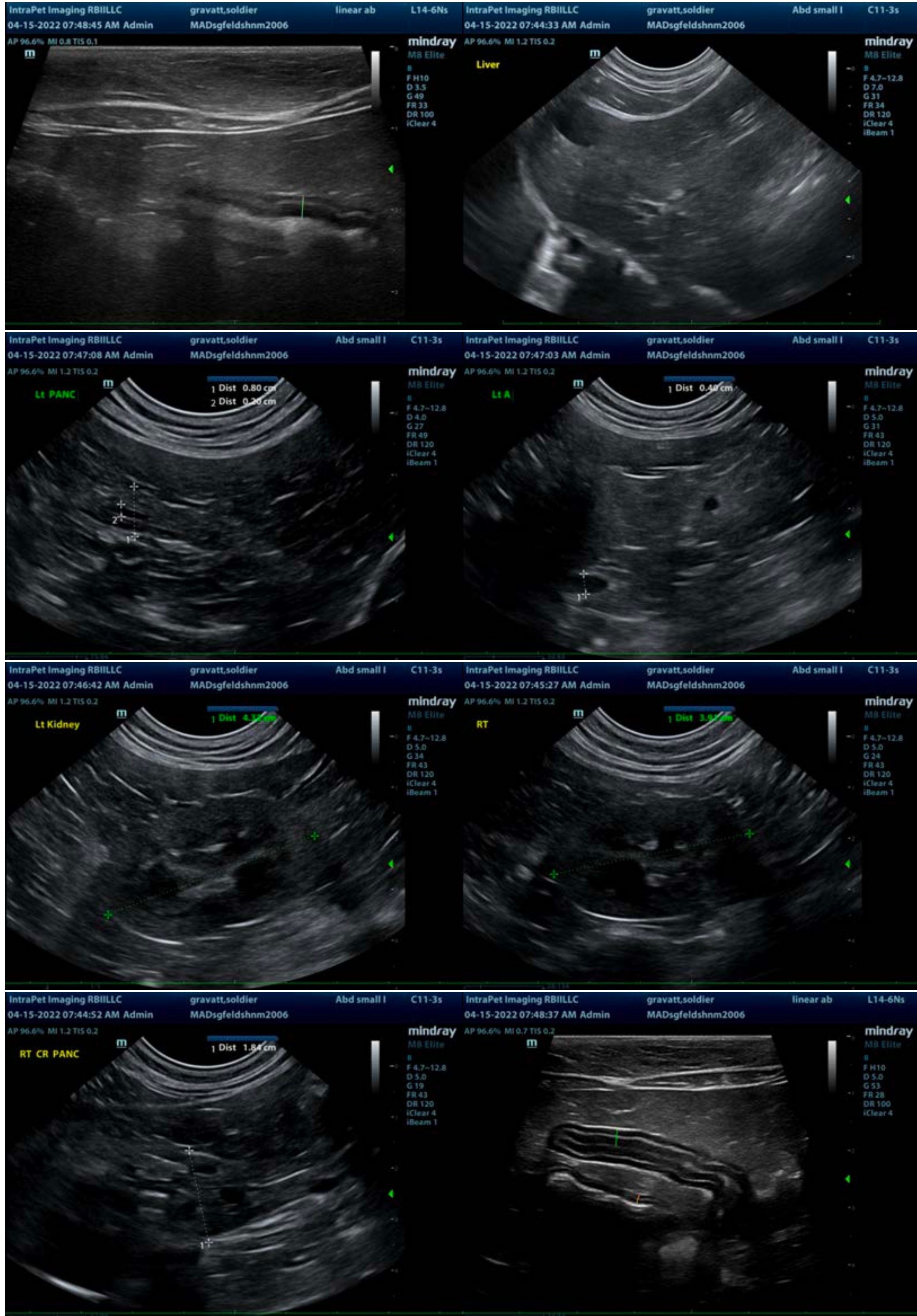
Analgesia for visceral pain, such as buprenorphine, is suggested, as well as supportive care, such as, subcutaneous fluids, anti-emetics and appetite stimulants.

Although indiscriminate use of antibiotics is not recommended, one could start treatment with a broad-spectrum antibiotic and reassess Soldier’s clinical status in 48-72 hours.

Treatment recommendations may change depending on the results of the TLI, serum cobalamin, and folate. Further diagnostics, such as endoscopy and biopsies, may be required to exclude neoplasia.

Immunosuppressants, other than steroids, may eventually be necessary for the treatment of triaditis.

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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.

Lisa Carioto, DVM, DVSc, Diplomate AVIM

Lisa.Carioto@sonopath.com