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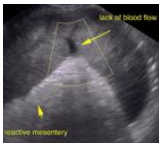

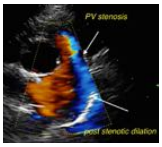

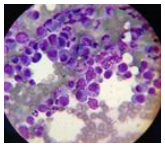
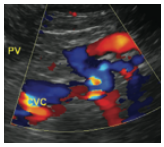

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1-800-838-4268 info@sonopath.com

PATIENT
Theo Ciopyk

SPECIES
Feline

BREED
Persian

SEX
Neutered male

AGE
9 years

WEIGHT
11 lbs

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Dr. Petrone

HOSPITAL NAME
Long Branch AH

REFERRING VET
Dr. Petrone

INVOICE
31847

DATE
7/20/22

PRESENTING CLINICAL SIGNS

History: 9 yo MN Persian. 5 day history of vomiting and anorexia. CBC/chem/T4: WNL

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is adequately distended. The wall is smooth and regular. No abnormalities are present with the trigone. A moderate to large amount of free floating and aggregated sediment is present, however, there is no evidence of cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 4.11 cm (3.80-4.40 cm). The capsule is smooth. The cortex is hyperechoic, i.e., it is isoechoic to the spleen. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 4.10 cm (3.80-4.40 cm). The capsule is smooth. A rectangular shaped, hyperechoic, cortical lesion is observed at the caudal pole. This is in addition to diffuse hyperechogenicity of the cortex. A mild loss of the normal definition of the cortico-medullary junction is present. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation No abnormalities observed.

Adrenal Glands

The **left** adrenal gland is not visualized, however, no abnormalities are noted in the surrounding area.

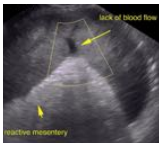
The **right** adrenal gland measures 0.39 cm at the cranial pole, 0.39 cm at the caudal pole. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

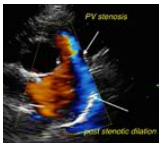
Spleen

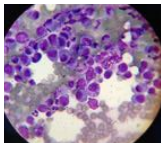
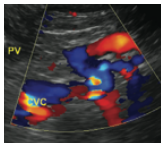
The spleen is within normal limits in size 8.3 mm (normal = 10 mm), echotexture, and echogenicity. The capsule is smooth. Small, hyperechoic foci are dispersed throughout the parenchyma, which are suggestive of mineralizations. They are not considered clinically significant. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

There are no obvious signs of hepatomegaly. The liver's borders are smooth, and vary between sharp to mildly rounded. It is diffusely hyperechoic, i.e., it is isoechoic to the falciform fat, but within normal limits in echotexture. Focal lesions are not observed. Although no abnormalities are noted with the hepatic vessels, the walls of the portal veins are mildly prominent (hyperechoic). The latter may be due to inflammation.





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The **gallbladder** (GB) is moderately distended with a moderate amount of free floating and inspissated echogenic material. The GB wall is mildly thickened (1.5 mm) and mildly hyperechoic. 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

A large amount of gas is present within the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

Duodenum: High normal to mildly thickened (0.27 cm), with preservation of the normal definition of wall layering. A small to moderate amount of fluid and gas are present. The serosa is more prominent than usual.

Jejunum: Wall thickness varies between within normal limits to mildly thickened (0.30 cm). The definition of the wall layers is preserved, with increased prominence of the mucosa, submucosa, muscularis and serosa. Fogging of the mucosa and muscularis is observed. A moderate amount of fluid, gas and ingesta are present, with ineffective peristalsis, i.e. a "to and fro" motion is observed. No major abnormalities are noted with the ileo-cecal-colic junction other than mild fogging of the mucosa.

Transverse colon: A large amount of gas is present. The wall layers are not as well-defined compared to the rest of the gastrointestinal tract, i.e. they are "hazy". It is not thickened (0.12 cm).

The colonic wall is not thickened and mural detail is considered normal.

Pancreas

The **pancreas** is slightly enlarged, mildly hypoechoic and has smooth contours. The surrounding mesentery is mildly hyperechoic, i.e., signs are suggestive of active pancreatitis.

Other

Lymph nodes

Mesenteric lymph nodes: two are mildly more prominent and larger than usual. Their borders are smooth.

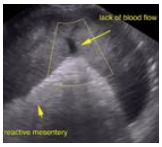
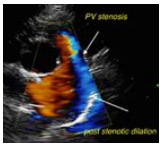
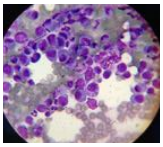
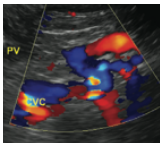
- 0.60 cm in diameter x 0.37 cm in length
- 0.59 cm in diameter x 0.49 cm in length

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- **Gallbladder**: Gallbladder sludge without evidence of an obstruction. Signs of cholecystitis are present. A suppurative component, cannot be excluded. Obtaining a history regarding signs of gastroesophageal reflux disease (GERD), from the client is suggested.

- **Gastrointestinal tract**: Signs of diffuse gastrointestinal inflammation are observed.

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Differential diagnoses include an acute flare up of a chronic enteropathy, e.g., inflammatory bowel disease, food intolerance, dysbiosis, etc. The transverse colon shows mild loss of detail, however, the changes are most likely due to inflammation rather than infiltrative disease (lymphoma or other round cell tumour). A definitive diagnosis may only be obtained by performing tissue biopsies and possibly immunohistochemistry and PARR.

- **Pancreas:** Active pancreatitis is suspected. Obvious signs of neoplasia are not appreciated.
- **Liver**: The diffuse hyperechogenicity may be due to cholangitis/cholangiohepatitis, cholestasis, as well as ascending inflammation secondary to pancreatitis. An infection due to ascending bacteria from the GI tract is also possible. Hepatic lipidosis may also be present given Theo's history.
- **Lymph nodes**: Most consistent with very mild reactive hyperplasia. There are no obvious signs of neoplasia.
- **Kidneys**: The caudal pole of the right kidney shows signs suggestive of an infarct and/or ischemia and secondary fibrosis. Very mild degenerative and/or inflammatory changes of the kidneys are noted. Obvious signs of pyelonephritis are not appreciated.
- **Urinary bladder**: Sediment in the lumen of the urinary bladder is most likely clinically insignificant, however, subclinical bacteriuria cannot be excluded.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested/recommended

Urinalysis, +/- culture and sensitivity

+/- Spec fPL to confirm pancreatitis

Analgesia for visceral pain, such as buprenorphine (0.005-0.01 mg/kg sublingually every 8-12 hours) for a minimum of 7-10 days. Continue for 3-4 weeks if an improvement is noted; the dose and frequency may be weaned to the minimum effective dose during that time.

+/- gabapentin

Obtaining a history regarding signs of gastroesophageal reflux disease (GERD), from the client is suggested.

If signs of GERD present, 10-14 day trial with famotidine or omeprazole (0.7-1 mg/kg PO q12h).

Cholangitis/cholangiohepatitis and cholecystitis cannot be excluded, including a secondary ascending bacterial infection. Although indiscriminate use of antibiotics is not normally recommended, one could start treatment with a broad-spectrum antibiotic.

Depending on responses to the above, serum cobalamin and folate, +/- TLI, to assess for underlying maldigestion and malabsorption disease, dysbiosis, respectively. Note, a TLI may be falsely elevated in the face of pancreatitis.

Depending on clinical response to the above treatments, a diet trial (veterinary prescription brand hypoallergenic, i.e., ideally a hydrolyzed diet, or a novel protein diet) may be tried.

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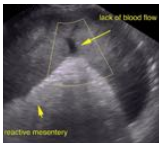
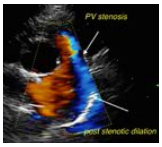
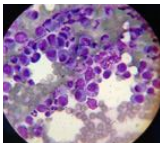
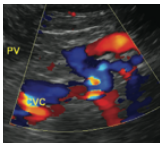

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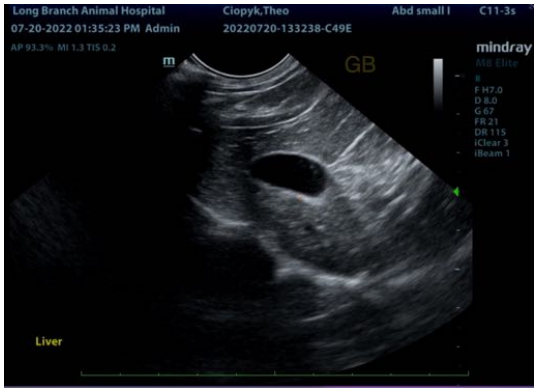

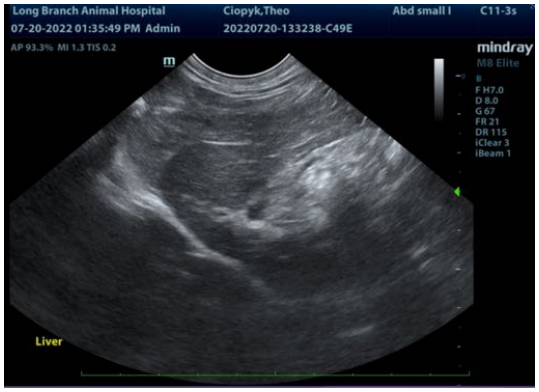

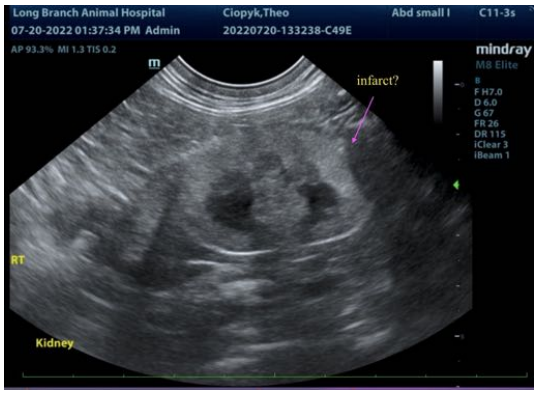

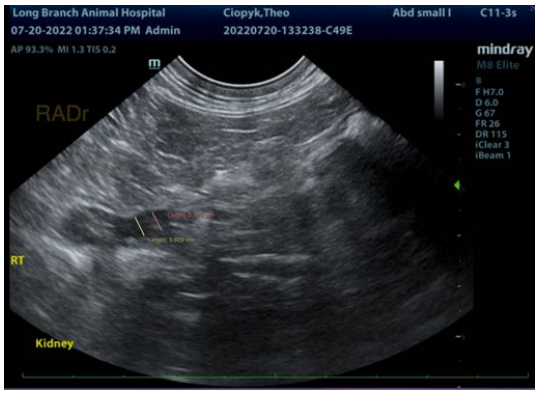

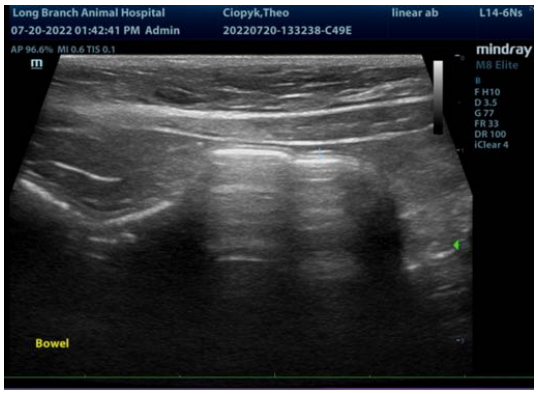

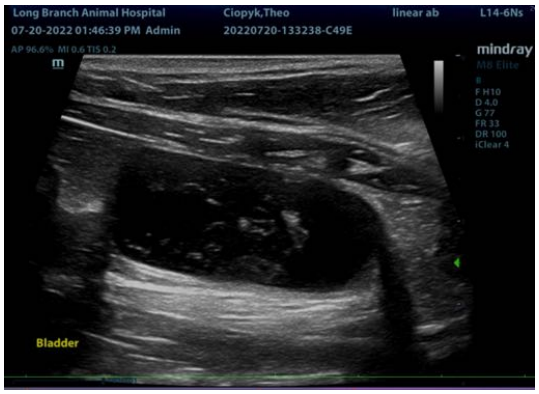

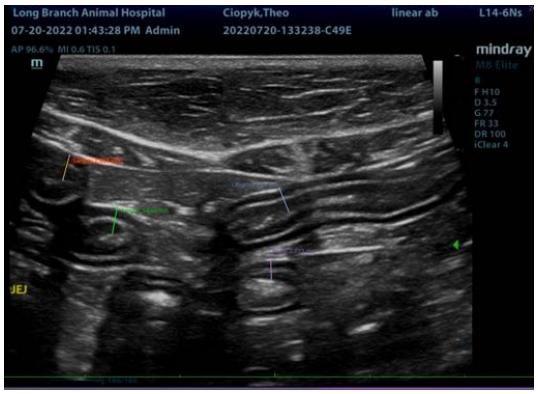

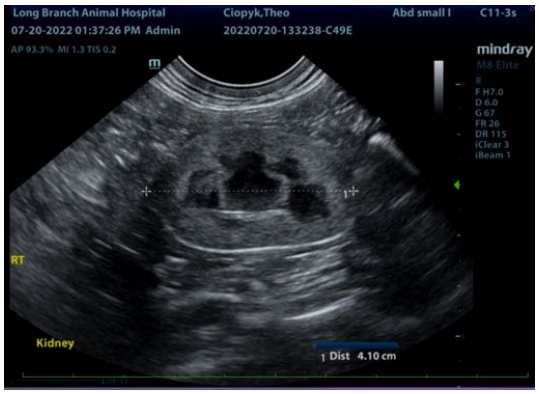

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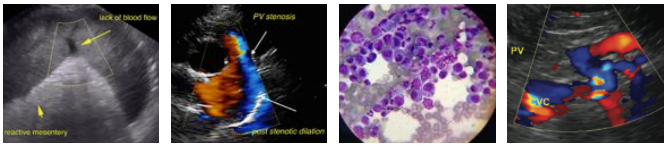

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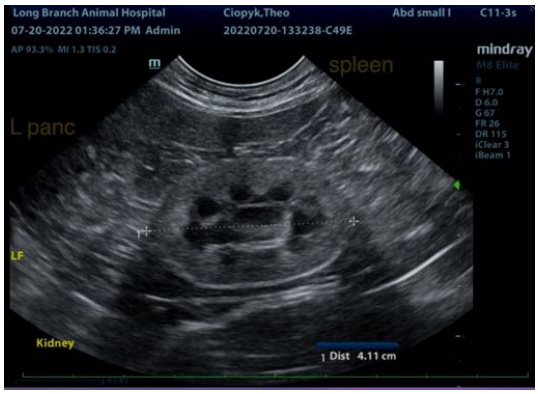

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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