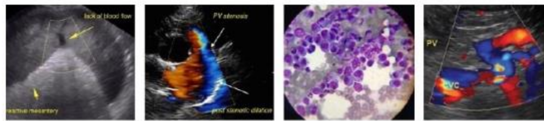
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Filfil Zhou

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

4 Years

WEIGHT

5.5 kg

INTERPRETED BY
Tam Mengine, DVM, DABVP (canine/feline practice)

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Hamilton Region Emergency Clinic

REFERRING VET

Dr. Vercaigne

INVOICE

21463

DATE

3/6/23

PRESENTING CLINICAL SIGNS

History: Vomiting, misshaped kidney on rads, abnormal fPLi, suspected hepatitis and/or cholangiohepatitis. Has been on Cerenia, Metronidazole, Torbugesic, Denamrin, Ampicillin
Abnormal PE/Chem/CBC/UA Results: abnormal fPLi, icteric, neutrophilia, elevated SDMA, elevated ALP, ALT and Total Bilirubin.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine, and no luminal sediment is present. The ureteral papillae, trigone and pelvic urethra are of normal appearance, and the ureters are not visible (normal). No masses, calculi or mucosal irregularities are noted. Urethra visualized to 3.0 cm.

Both kidneys are hyperechoic, with irregular cortical margins, and decreased corticomedullary differentiation. There are multiple infarcts note din the renal cortex of each kidney. There is mild dilation of both renal pelvises, with anechoic contents. There is no evidence of nephrolithiasis or hydronephrosis. The proximal ureter is not visible (normal). The left kidney measures 4.2 cm in length. The right kidney measures 3.7 cm in length.

Adrenal Glands

The adrenal glands are both identified in their normal locations. They are normal in size and shape with appropriate parenchymal echogenicity and normal phrenic vasculature. The left adrenal gland height is 3.2 mm at the caudal pole. The right adrenal gland height 3.9 mm at the caudal pole.

Spleen

The spleen is diffusely thickened, measuring 1.1 cm at the hilus. The capsular margins are regular and the parenchyma is normal. The splenic vasculature is normal with no evidence of congestion or thrombosis, and blood flow through the splenic hilus appears normal. Thickness at the splenic hilus is normal at 1.1 cm.

Liver

The liver is diffusely hyperechoic and subjectively enlarged. The portal and hepatic vasculature are of normal size and appearance with no evidence of congestion or thrombosis.

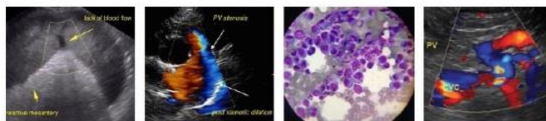
The gallbladder is markedly distended with anechoic bile, and the cystic duct is dilated to 7.0 mm. There is no visible obstruction present within the duct. The gallbladder wall is thin and continuous with no focal lesions.

Gastrointestinal

The stomach is empty. The gastric wall is subjectively normal in thickness , and exhibits appropriate wall layering, but cannot be accurately measured due to normal deviations of the rugal folds. The pylorus is of normal appearance.

The small bowel has focal changes to the normal 1:3 muscularis to mucosa ratio. Wall measurements are increased up to 2.9 mm for duodenum and 3.2 mm for jejunum. Overall wall layering is preserved. Intestinal motility appears normal.

The visible portions of the colon are of normal thickness, up to 1.9 mm, with intact wall layering. The ileocecal junction is visualized and appears normal.



PATIENT

Filfil Zhou

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

4 Years

WEIGHT

5.5 kg

INTERPRETED BY
Tam Mengine, DVM, DABVP (canine/feline practice)

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Hamilton Region Emergency Clinic

REFERRING VET

Dr. Vercaigne

INVOICE

21463

DATE

3/6/23

Pancreas

The entirety of the pancreas is swollen and hypoechoic, surrounded by hyperechoic mesenteric fat. The pancreatic duct is dilated.

Free Abdomen

There is no evidence of free fluid within the peritoneal cavity. The omentum and intra-abdominal fat are of appropriate echogenicity. Enlarged abdominal lymph nodes are not observed. The aortic trifurcation has normal blood flow with no evidence of thrombosis.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- A hypoechoic, swollen pancreas with pancreatic duct dilation
- A distended gallbladder and cystic duct, most consistent with extrahepatic bile duct obstruction
- Diffusely thickened small bowel, with focal increase in the muscularis to mucosal ratio, consistent with infiltrative bowel disease
- Bilaterally irregular kidneys, with evidence of prior infarcts
- Regional peritonitis, especially in the region of the pancreas

Secondary Findings

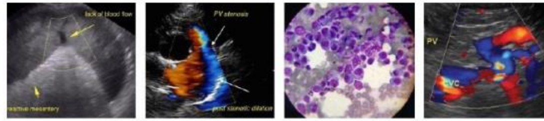
- Thickened spleen

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes noted in the pancreas, gallbladder, and GI tract are suggestive of feline "triaditis" syndrome, with secondary extrahepatic bile duct obstruction. Recommendations include:

The inflammatory changes in the (liver / pancreas / GI tract) are suggestive of feline "triaditis" syndrome. Recommendations include:

- Depending on the severity of the elevated bilirubin, surgical intervention may be warranted. Otherwise, medical therapy, including Ursodiol, and potentially steroids, may be of use in relieving cholestasis.
- A complete GI panel and bile acids testing
- supportive care including fluid therapy, antiemetics, analgesics, appetite stimulants (if needed) and cobalamin supplementation are warranted.
- trials with a novel protein or hydrolyzed diet
- Treatment with denamarin and ursodiol are recommended, and treatment with antibiotics such as amoxicillin-clav and/or a fluoroquinolone could be considered as empiric treatment for cholangiohepatitis.
- Empiric treatment with prednisolone at 2-4 mg/kg/day could be considered, particularly if response to other treatments is lacking.



PATIENT

Filfil Zhou

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

4 Years

WEIGHT

5.5 kg

INTERPRETED BY
Tam Mengine, DVM, DABVP (canine/feline practice)

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Hamilton Region Emergency Clinic

REFERRING VET

Dr. Vercaigne

INVOICE

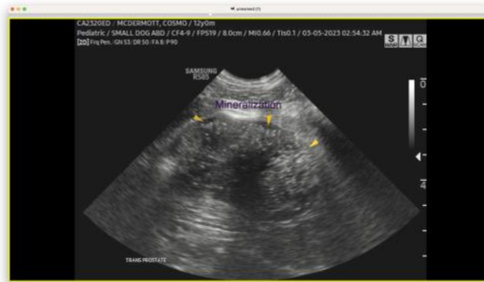
21463

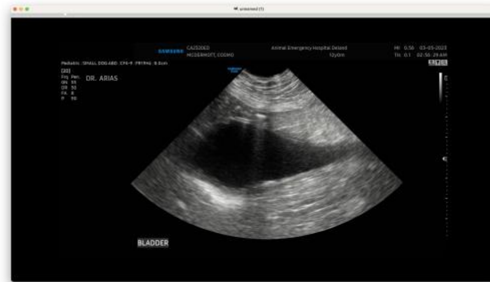
DATE

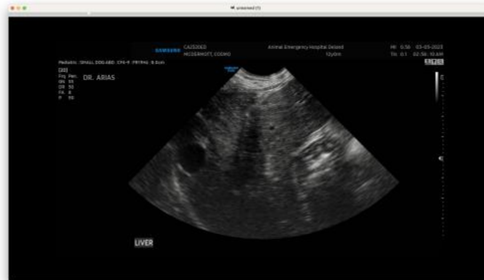
3/6/23

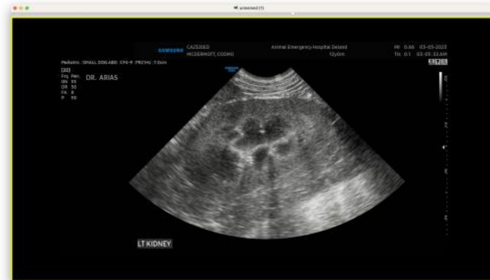
- Definitive diagnosis would require biopsy of the affected tissue, ideally with intra-operative ultrasonographic guidance . If there is concurrent lymphadenopathy, ultrasound-guided sampling of the lymph node using a 25 or 22G needle could be considered.

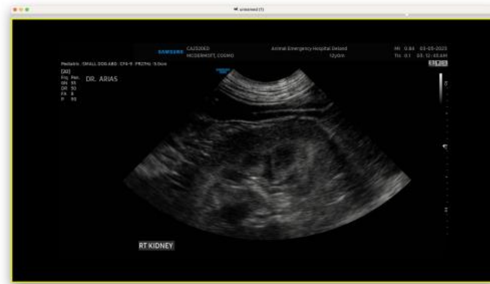
The changes to both the spleen and kidney are likely incidental, however, fine needle aspirate would be necessary to rule out the possibility of neoplasia in both organs. Alternately, reassessment via ultrasound after medical management of the acute triaditis may help determine the significance of these changes.

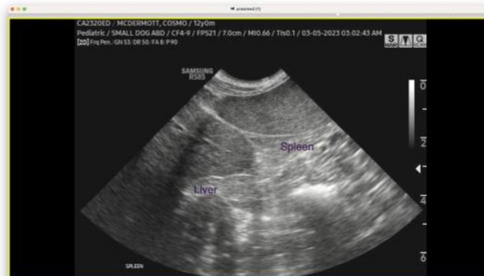




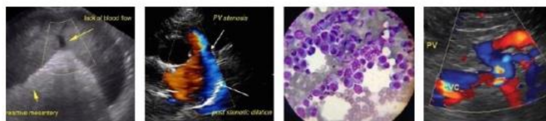








The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not



PATIENT

Filfil Zhou

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

4 Years

WEIGHT

5.5 kg

INTERPRETED BY
Tam Mengine, DVM, DABVP (canine/feline practice)

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Hamilton Region Emergency Clinic

REFERRING VET

Dr. Vercaigne

INVOICE

21463

DATE

3/6/23

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.

Tam Mengine, DVM, DABVP (canine/feline practice) info@SonoPath.com