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Clinical Sonography & Telecytology
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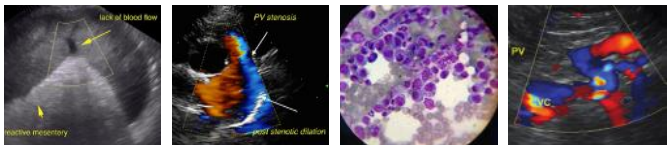

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Cookie Lindquist

SPECIES
Feline

BREED
DSH

SEX
FS

AGE
14 years

WEIGHT
6.4 pounds

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Jessica Miller

HOSPITAL NAME
American Animal Hospital

REFERRING VET
Dr. Stockmal

INVOICE
10498ag

DATE
05/02/2022

PRESENTING CLINICAL SIGNS

History: Dx w/ Pancreatitis 3/21 originally doing well w/ Pred now losing weight. 3/21 AUS = liver sl. coarse + hyperechoic, mildly thickened muscularis. Current meds: Prednisone 2.5mg SID, Mirtazapine 0.9mg SID-EOD

Abnormal PE/Chem/CBC/UA Results: 3/19/21: PLI=4 pancreatitis, 1/17/22 K=3.3, Eos = 1575, Neuts + 12950

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.8 cm in length. The right kidney measured 4.3 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.30 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.38 cm width.

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted. The spleen measured 0.68 cm in width at the level of the hilus.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content and minor luminal debris. The proximal common bile duct was dilated and tortuous without overt post hepatic obstruction measuring 0.2 cm in diameter.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild to moderate hyperechoic ingesta exhibiting progressive distal acoustic shadowing primarily in the gastric fundus and body. Nonshadowing chyme was present in the antrum and pylorus.

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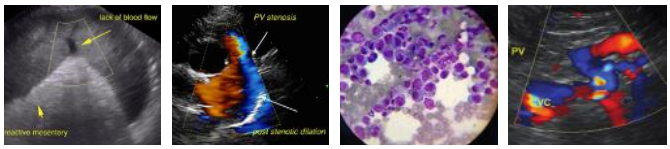

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. The jejunum wall measured 0.23 cm in width. The ileocolic wall measured 0.32 cm in width. The duodenum wall measured 0.24 cm in width.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The left limb, right limb, and base of the pancreas presented hypoechoic to heterogeneous echogenicity compared to adjacent omental fat. Mild asymmetrical capsule margination was present with mild variable parenchymal swelling and mild peripancreatic reactivity / inflammation. A focal area of subjective hypoechoic right pancreatic parenchymal swelling exhibiting capsule asymmetry and nonspecific focal hyperechoic parenchyma foci measuring approximately 1.6 cm x 1.3 cm was present. No overt evidence of neoplasia.

Free Abdomen

A small pocket of scant free fluid was noted in the left lateral abdomen adjacent to the caudal lateral spleen.

A focally enlarged colic lymph node was present. The lymph node was homogenous, mildly hypoechoic and smoothly marginated. A normal width: length ratio was maintained (<0.5). Evidence of perilymphatic inflammation was evident. An example of lymph node size was 0.29 cm in diameter.

ULTRASONOGRAPHIC FINDINGS

- Generalized chronic to chronic active pancreatitis pattern
- Regional right pancreatic hypoechoic to swollen parenchyma with potential for hypoechoic nodular lesion exhibiting nonspecific parenchymal hyperechoic foci-focal active pancreatitis with potential focal pancreatic fibrosis, possible pancreatic neoplastic criteria with focal pancreatic mineralization possible
- Overtly normal GI tract
- Nonobstructive proximal common bile duct dilation. This finding may suggest age related changes or secondary to underlying cholangitis / cholangiohepatitis especially if previous or current liver enzymes elevations have been noted.
- Mild chronic renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Assuming normal clotting status an ultrasound guided FNA of the swollen right pancreatic parenchyma vs hypoechoic nodular lesion using a 25g needle is warranted for screening cytology. Potentially the current use of prednisolone may be masking intestinal mural changes. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended for further assessment. Triad disease could be considered an alternative differential diagnosis. Minor potential for overlaying hypoechoic pancreatic or duodenal lymphadenopathy in the area of the right pancreas cannot be definitively excluded.

Empirical therapy for pancreatitis +/- triaditis would be reasonable.

Crain SK, Sharkey LC, Cordner AP, Knudson C, Armstrong PJ. Safety of ultrasound-guided fine-needle aspiration of the feline pancreas: a case-control study. J Feline Med Surg. 2015 17(10):858-63.

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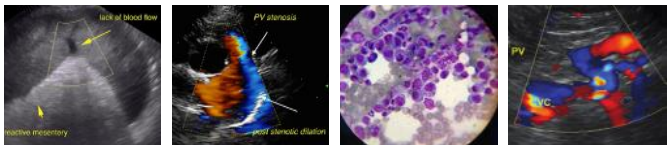

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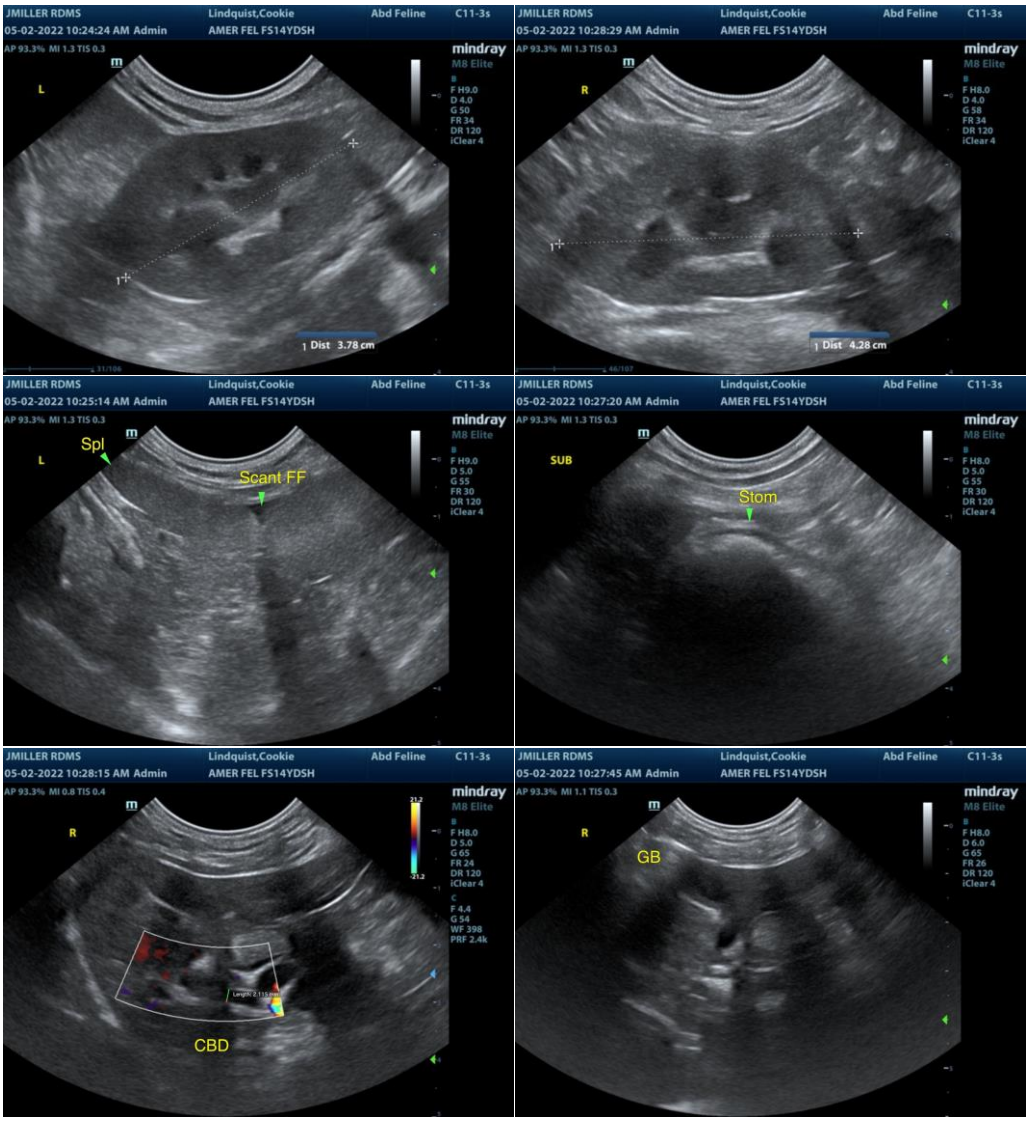
The safety of fine-needle aspiration (FNA) of the feline pancreas has not been reported. The incidence of complications following ultrasound-guided pancreatic FNA in 73 cats (pancreatic aspirate [PA] cats) with clinical and ultrasonographic evidence of pancreatic disease was compared with complications in two groups of matched control cats also diagnosed with pancreatic disease that either had abdominal organs other than the pancreas aspirated (control FNA, n = 63) or no aspirates performed (control no FNA, n = 61). The complication rate within 48 h of the ultrasound and/or aspirate procedure did not differ among the PA cats (11%), control FNA (14%) or control no FNA (8%) cats. There was no difference in rate of survival to discharge (82%, 84% and 83%, respectively) or length of hospital stay among groups. The cytologic recovery rate for the pancreatic samples was 67%. Correlation with histopathology, available in seven cases, was 86%. Pancreatic FNA in cats is a safe procedure requiring further investigation to establish diagnostic value.



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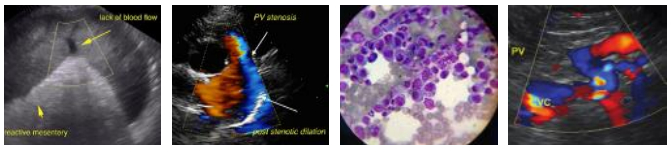

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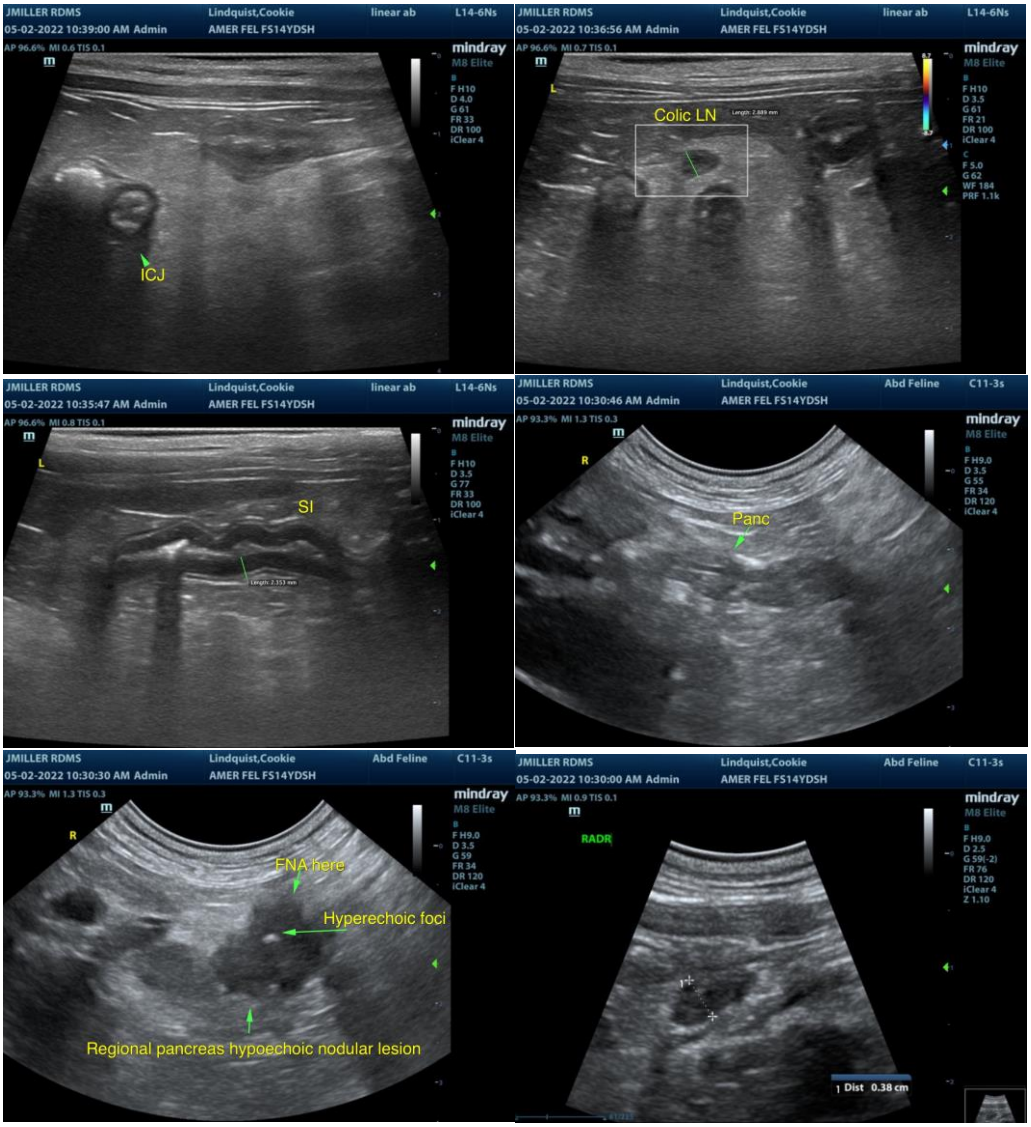

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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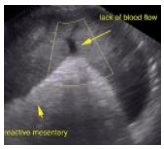

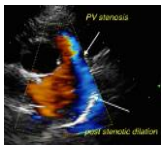

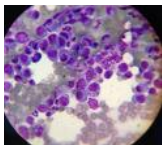
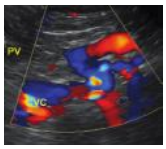

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