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Clinical Sonography & Telecytology
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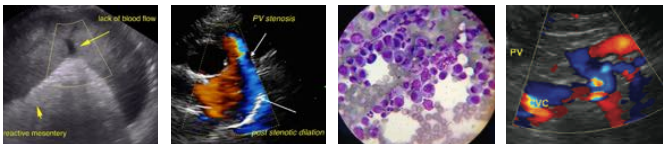


PATIENT

Max Knapp

SPECIES

Feline

BREED

Exotic

SEX

Neutered Male

AGE

5 Years

WEIGHT

5 Pounds

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Westwood VH

REFERRING VET

Dr. McConnell/Dr. Hartwick

INVOICE

91418

DATE

8/23/21

PRESENTING CLINICAL SIGNS

History: Chronic diarrhea (months), non-responsive to fiber diets, responsive to metronidazole, weight loss, rough hair coat, dehydrated, weak, URI, mucousy/bloody discharge bilateral nasal Current drugs: renal kt gel, metronidazole, baytril, convenia, nebulization, saline

Abnormal PE/Chem/CBC/UA Results: RBC 5.41, HCT 20.8, Hgb 6.9, WBC 20-28 (was 34.88) Neut. 16.63 (was 31.21) HCT 26%, PCV/TP 14%/2,1

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **kidneys** were normal in size and contour. The right kidney revealed slight mineralization. The right kidney measured 4.78 cm with occasional cortical cyst. The left kidney measured 4.41 cm with occasional cortical cyst.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.38 cm.

Spleen

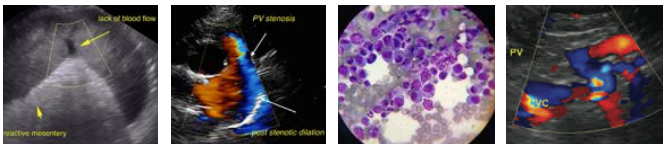
The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

Liver

The **liver** in this patient revealed increased portal markings with multi-focal, hyperechoic, nodular changes. The liver was normal in size. The nodular changes in the liver were variable in size with increased portal markings. Two separate gallbladder type structures were noted in this patient and were non vascular. This is likely primary gallbladder and vestigial gallbladder. This is a normal variant.

Gastrointestinal

The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropey" small intestinal wall with slight disruption of the normal 1:3 muscularis/mucosal ratio. The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade,



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chronic disease. No concerning lymphadenopathy was visible. No evidence of obstruction was present. Chronic inflammatory bowel disease is likely with a low possibility of an early neoplastic event such as lymphoma. Full thickness tissue biopsies via open laparotomy, ideally guided by intraoperative ultrasound in order to obtain the most representative mural sample, would be necessary to rule out this possibility.

Pancreas

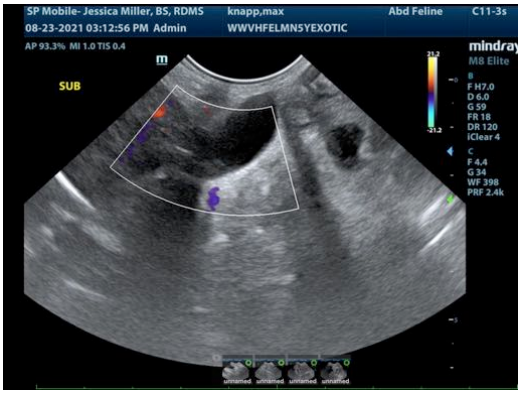
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

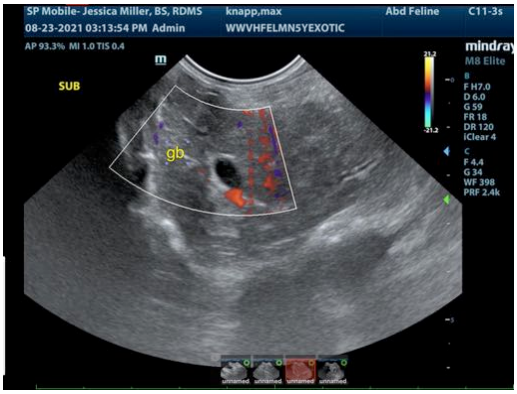
ULTRASONOGRAPHIC FINDINGS

- Inflammatory bowel with chronic cholangitis is likely with potential for underlying FIP.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I am concerned for dry form FIP in this patient versus cholangitis. The cause of anemia is unclear. There is no evidence of hemorrhage. Bone marrow disease may be an issue. CBC path review +/- bone marrow biopsy or aspirate are all recommended. Ultrasound-guided FNA of the liver is also indicated to assess for granulomatous disease. Bile acid profile is also warranted. A clinical trial of Zithromax and Metronidazole could be considered. Infectious agents such as Toxoplasmosis and Bartonella should be ruled out.





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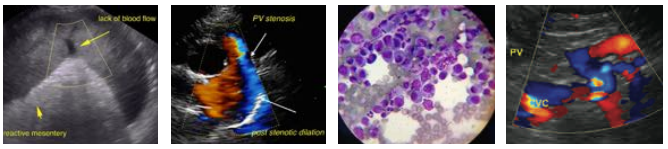

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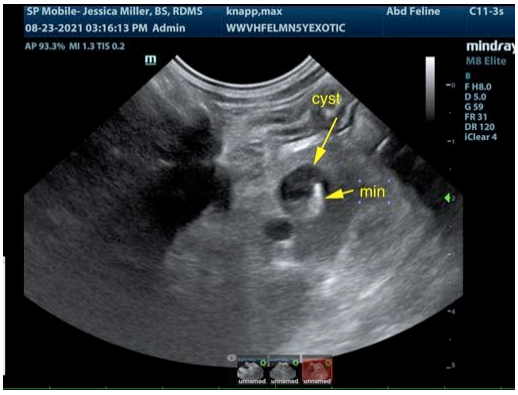

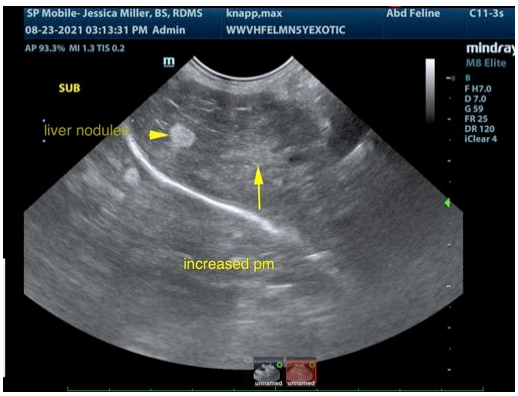

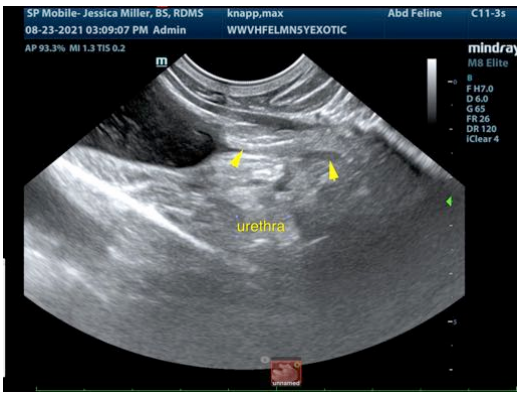

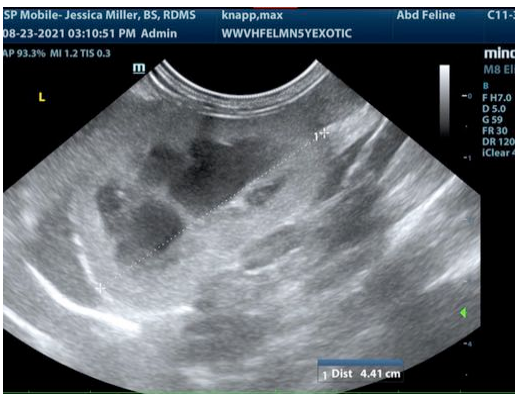

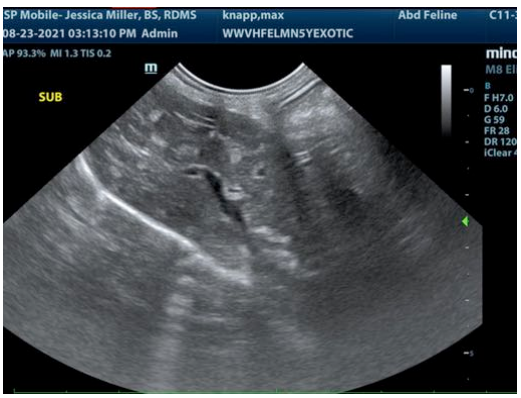

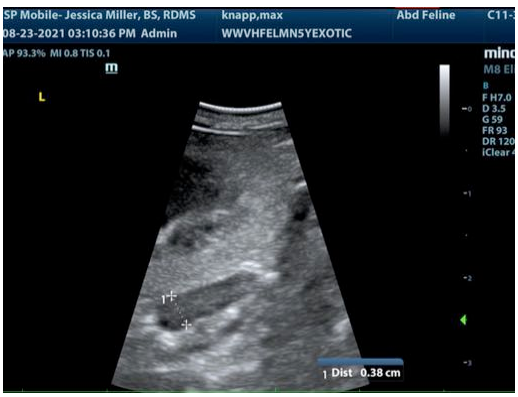

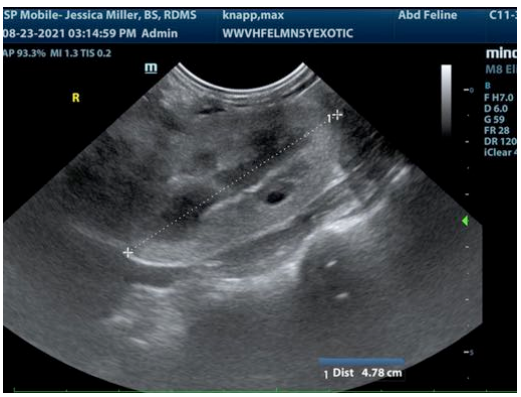

The information and recommendations provided are based on the images presented by the referring

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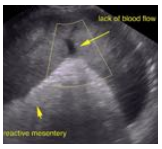

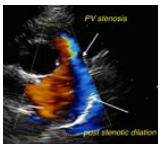

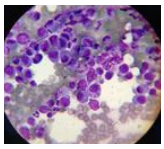
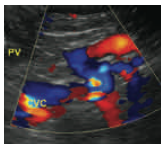

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veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com