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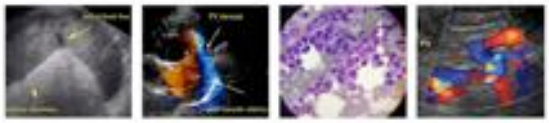

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Mikey OConnor

SPECIES

Canine

BREED

Sheepdog

SEX

Intact Male

AGE

3 years

WEIGHT

14 Pounds

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

HOSPITAL NAME

Mountain View AH

REFERRING VET

Dr. Kalivoda

INVOICE

91897

DATE

9/16/21

PRESENTING CLINICAL SIGNS

History: Hepatic encephalopathy suspicious for a portosystemic shunt. Mikey presented to animal emergency and critical care specialists for acute onset of ataxia and seizure like activity. He was hospitalized and diagnosed with hepatic encephalopathy with hyperammonianemia. . He was monitored overnight on IV fluids and was not seen to have a seizure while hospitalized. Recommended that Mikey receive and abdominal ultrasound to investigate for possible PSS. Mikey came to Mountain View Animal Hospital for a second opinion about his diagnostics and next steps for Mikey. Recommend abdominal ultrasound to look for a portosystemic shunt (extrahepatic most likely) and discuss surgical referral options. Given history of hepatic encephalopathy we placed Mikey on Hill's L/D diet and started lactulose. Recent Diagnostics: Relevant Laboratory Results / Abnormalities: performed at another hospital CBC: unremarkable, mild neutropenia at 2.81 PCV 52, TS 5.4g/dL CHEM: ALP <10, ammonia 170, otherwise unremarkable Bile Acids: WNL Current medications (include full name, dosage and frequency): ~~ Lactulose 1.5ml PO BID Hill's Rx K9 L/D

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** and visible pelvic urethra were unremarkable for the level of repletion presented. The urine, however, did present some mildly echogenic debris consistent with mucous, exfoliated cells from renal or bladder origin, and/or blood clots as these echogenic changes can all present similarly. This is often related to urinary tract infection but may represent simple evidence of exfoliated debris or sterile inflammation. Cystocentesis, urinalysis, +/- culture would be recommended to rule out and define any UTI.

The prostate was uniform and measured 1.89 cm.

The iliac trifurcation was unremarkable.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 3.61 cm. The left kidney measured 3.61 cm.

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 right adrenal gland measured 0.5 cm. The left adrenal gland measured 0.43 cm at the caudal pole and 0.37 cm at the cranial pole.

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 was noted.

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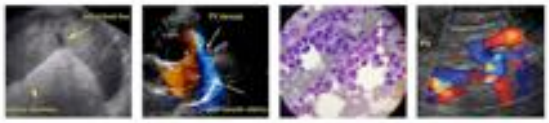

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Liver

The **liver** was fairly normal to slightly subnormal in size with increased portal markings. Normal intrahepatic vascular volume was noted. The vena cava at the level of the portal hilus measured 0.5 cm. The portal vein measured 0.5 cm just prior to the branching in the portal hilus. The vena cava appeared slightly dilated in some views. This may be owing to sedation if utilized during the sonogram. The gallbladder and common bile duct were unremarkable. The changes are consistent with the history of cholangitis.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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

Mild microhepatica.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is no evidence of portosystemic shunting. Portal hypoplasia/microvascular dysplasia along with history of cholangitis is likely playing a role in the liver profile and elevated ammonia level. Further treatment would be based on core biopsy results for further management. If the seizure activity continues then CT with contrast of the brain is recommended. An acute onset such as Leptospirosis or similar toxin exposure along with the current hepatic presentation could present in a temporary hepatic encephalopathy. However, I would also expect bile acids to be elevated. There is no portal systemic shunting in this patient. However, portal hypoplasia/microvascular dysplasia cannot be ruled out.

For an additional charge an internal medicine consult can be utilized through Sonopath.com. You can select the internal medicine drop down at http://spa.sonopath.com/.

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services

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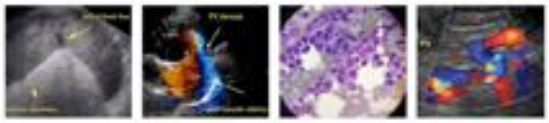

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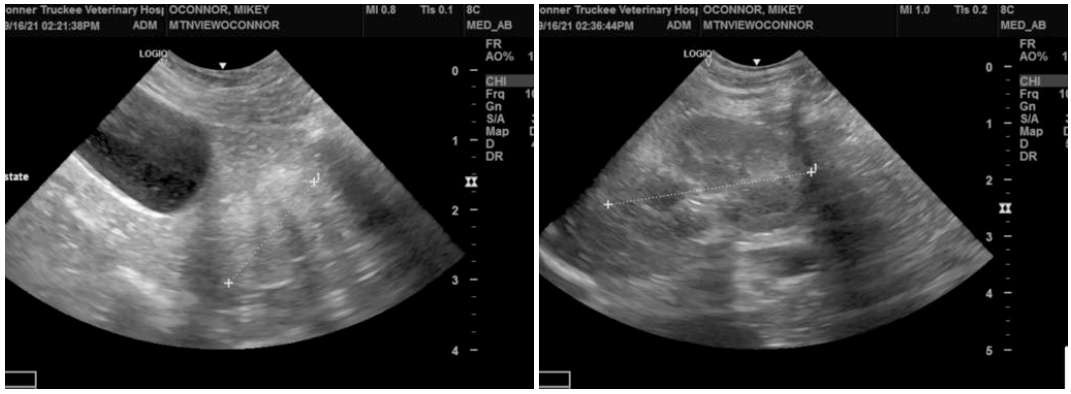

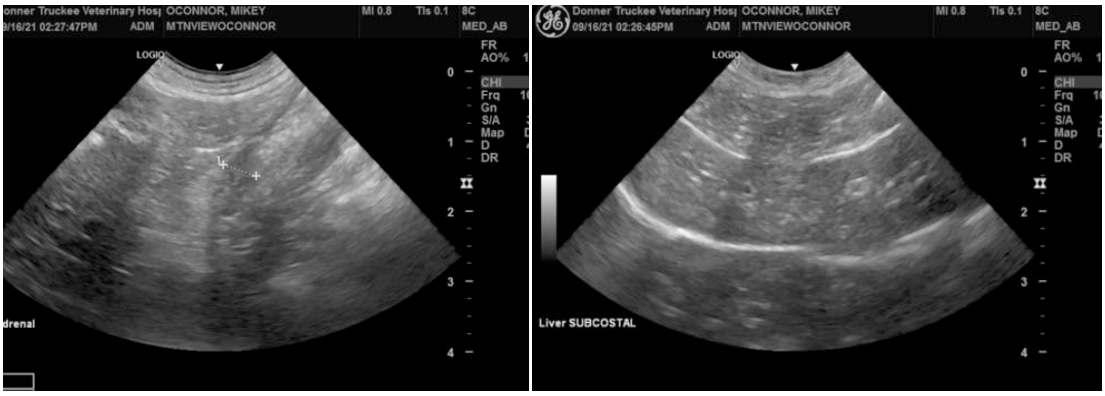

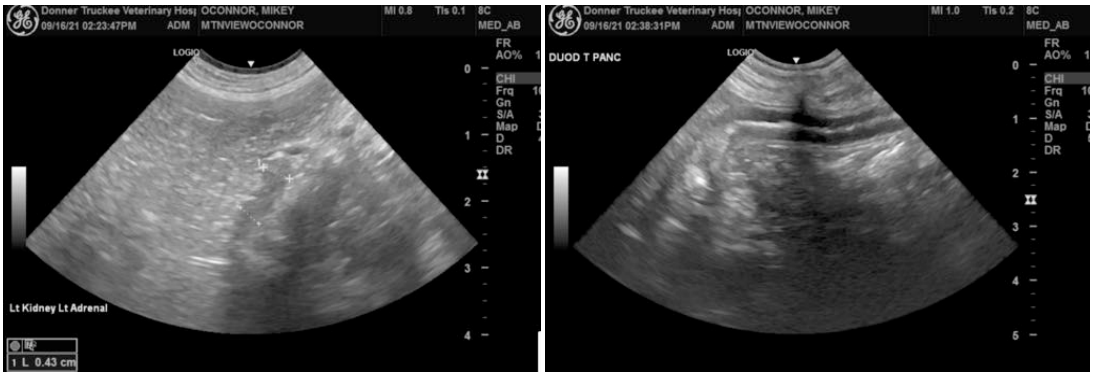

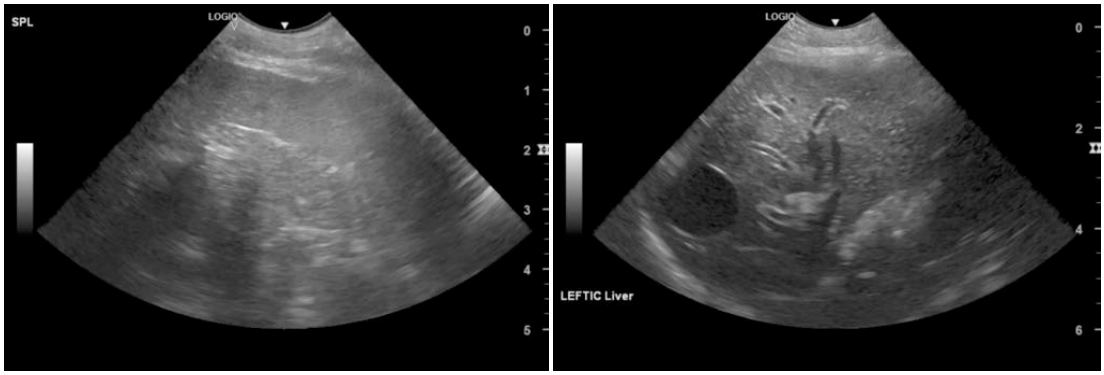

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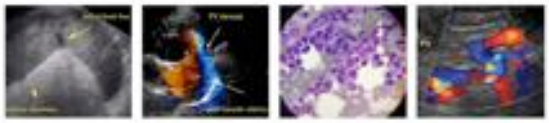

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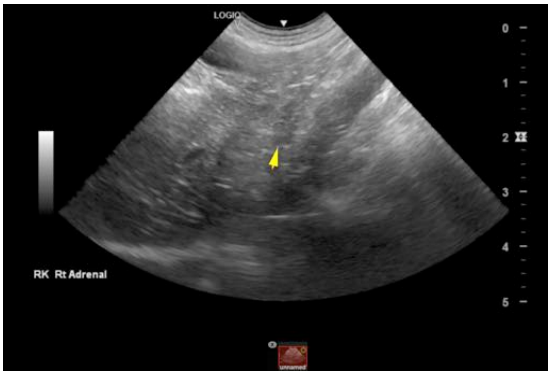

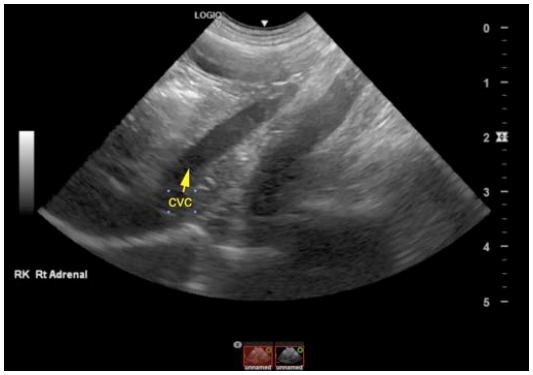

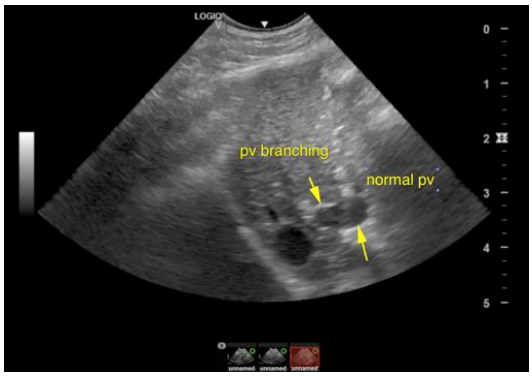

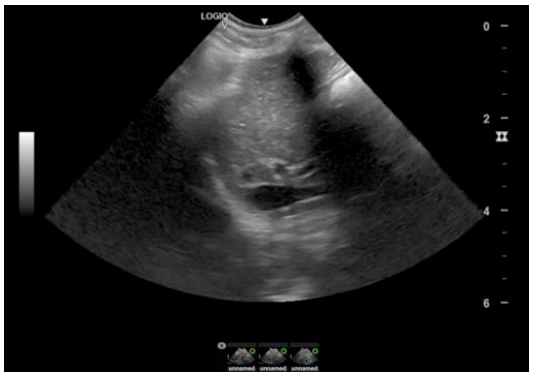

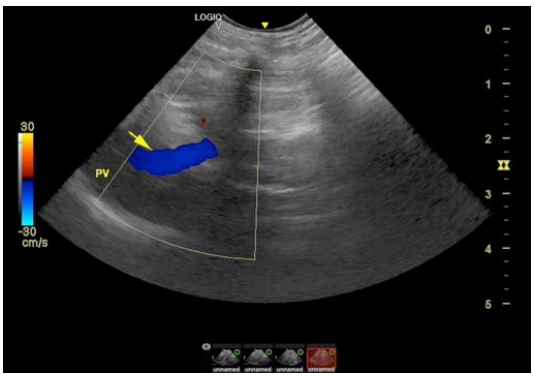

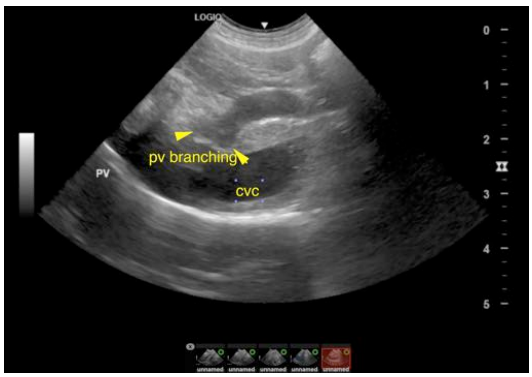

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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