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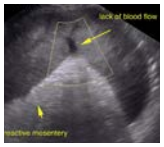
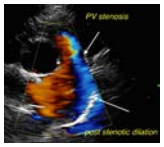
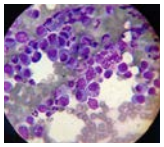
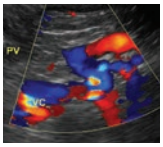

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1-800-838-4268 info@sonopath.com

PATIENT

Peanut McMurtrie

SPECIES

Canine

BREED

Cock-A-Poo

SEX

Neutered Male

AGE

9 Years

WEIGHT

18 lb 12.5 oz

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. John Bucha

HOSPITAL NAME

Harveys Lake VC

REFERRING VET

Dr. John Bucha

INVOICE

41682

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9/27/22

PRESENTING CLINICAL SIGNS

Patient presented 7/5/22 for bloody diarrhea, no vomiting was present at that time and patient was eating and drinking normally. Patient was also stressed that weekend due to the holiday and a lot of fireworks being lit off. Diagnostics at that time were Intestinal Parasite Screen - no parasites seen and a Chem Panel and CBC were performed (results WNL - attached to case). Patient was treated for the symptoms and did well. Patient presented 8/22/22 for not eating, vomiting, diarrhea over the past week. Physical Exam Findings 8/22/22: Weight: 17.9 lbs BCS: 5 /9 T: 102.5 P: 130 R: 20 -Slight otitis present in both ears -slight plaque present on teeth *Patient was given Torbugesic 0.16cc IV (1.6mg) prior to diagnostics* Diagnostics 8/22/22: Chem Panel, CBC, Urinalysis via cystocentesis (results attached to case) CpL Snap (Abnormal) Global Ultrasound - only abnormal comments at that time were urinary bladder is thickened and has speckled appearance (suspect blood clots), the pancreas appears hypoechoic. Abdominal Fluid Score: 0 (results attached to case) Treatments 8/22/22: -Convenia: 0.81cc SQ (64.8mg) -Cerenia injection: 1.0cc SQ (10.0mg) -SQ Fluids LRS: 250cc -Entyce: Give 0.8cc SID if not eating well -Cerenia 24mg: 1 tab SID -Diagel: 1cc SID for diarrhea -Proviable FORTE Kit: Paste: 2mls BID-TID for diarrhea -Prednisone 5mg: 1 tab SID for 1 week, then 1/2 tab SID for 1 week, then 1/2 tab EOD for 1 week Peanut did well when on the medications but once the owner stopped them he would stop eating and get vomiting /diarrhea again. Owner stated that he has not been eating well since 8/22/22 even with giving the Entyce. Peanut will eat a little every day but not much food per owner. Recommended full abdominal ultrasound and radiographs. *Patient was given Gabapentin 50mg last night and 2hrs prior to appt today, and Torbugesic: 0.16cc IV (1.6mg) was given prior to ultrasound* 9/27/22: Patient presented for abdominal radiographs and full abdominal ultrasound (all included). Patient weighed 18lbs 12.5oz today Ultrasound comments: Suspect enlarged lymph nodes throughout the abdomen, multiple areas of perineal fluid present- none of these findings were present 5 weeks ago when the Global Ultrasound was performed. Treatment 9/27/22: -Continue Entyce and Cerenia, treat diarrhea if present -Prednisone 5mg: 1 tab SID

Abnormal PE/Chem/CBC/UA Results: Normal Lab Work from 7/5/22 - included Lab Work and Global Fast Ultrasound comments from 8/22/22 - included Radiographs and abdominal ultraosound from 9/27/22 - included

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Mineral/sand debris is settled along the dependent wall as well as suspended crystal suspected. Apical urinary bladder wall is diffusely thick (0.47 cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

The right kidney is normal in size (5.5 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (4.5 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is normal in size (0.33 cm at the cranial pole and 0.32 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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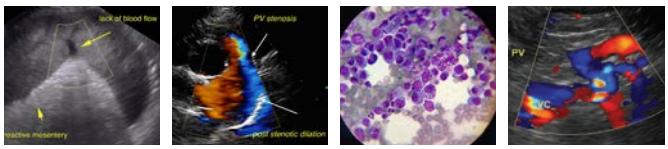

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The left adrenal gland is normal in size (0.42 cm at the cranial pole and 0.47 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is normal to subjectively small in size with slightly undulating or scalloped capsular contour or margins. Parenchyma is diffusely heterogenous with increased portal markings and coarse architecture. Particularly rounded emerging mass-like lesion noted in the left caudal liver, measuring 2.0 cm x 3.4 cm in size with a diffusely hypoechoic appearance. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

Small intestine is diffusely mildly thick with a relatively thick mucosa compared to other layers. Normal wall layering is preserved; however, the mucosa is more echogenic than normal and contains hyperechoic striations perpendicular to the lumen. The lumen is empty with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and irregular in shape with a swollen undulating contour. Enhanced hyperechoic ill-defined surrounding fat is noted.

Free Abdomen

A moderate amount of anechoic free fluid is present as well as diffusely clumped enhanced hyperechoic mesentery, most appreciated in the cranial abdomen, where there is also suspect mild hypoechoic lymphadenopathy around the pancreas.

PRIMARY FINDINGS

- **Lymphangiectasia** – Small bowel findings are most consistent with lacteal dilation. These findings can be observed with protein-losing enteropathies caused by either primary lymphangiectasia or primary infiltrative inflammatory disease with secondary lymphangiectasia. Infiltrative neoplasia is possible but considered less likely. Histopathology is necessary to definitively determine underlying cause.

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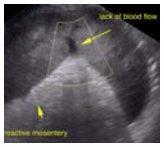
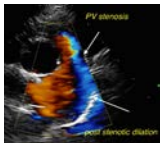
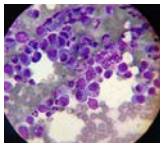
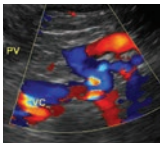

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- **An inflammatory hepatopathy is suspected with an emerging suspect hypoechoic nodule/mass in the left caudal liver** – Differentials include infiltrative disease such as round cell neoplasia or primary hepatic neoplasia (either benign or malignant), adenoma, hepatoma, hepatocellular carcinoma, etc., as well as other nodular change as is seen with benign nodular hyperplasia, etc.

- Concurrent acute pancreatitis is suspected

SECONDARY FINDINGS

- Urinary bladder debris including crystalluria and mineral/sand debris

- **Gallbladder debris -** Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's reported hypoalbuminemia and suspect lymphangiectasia, the free fluid and hyperreactive mesentery, etc. in the abdomen is likely secondary to lymphangiectasia, and some of the suspect inflammatory changes around the pancreas and liver may all be related. However, at least mild concurrent pancreatitis is suspected as well as current or at least resolving hepatis in addition to possible infiltrative disease resulting in the emerging mass-like lesion in the liver. Therefore, recommendations include:

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

Recheck CBC and chem panel is also recommended, and if bilirubin is normal, then bile acids are also recommended. Additionally, a fine needle aspirate of the suspected liver nodule could be considered if patient's coagulation status is appropriate or could be considered after clinical resolution of the hypoalbuminemia, pancreatitis, etc. if the appearance of the liver still concerning at that time.

In the meantime, in addition to symptomatic supportive medical management of the acute illness, additional empirical therapies include empirical deworming with a 5-day course of Panacur, cobalamin supplementation (unless not indicated based on GI panel results), a probiotic, transition to an ultra low-fat diet, +/0 Prednisolone if not contraindicated based on patient contraindications, comorbidities, etc. In addition, calcium monitoring and supplementation, if necessary, is also recommended.

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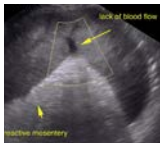
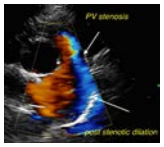
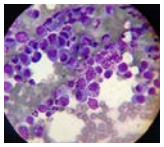
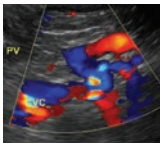

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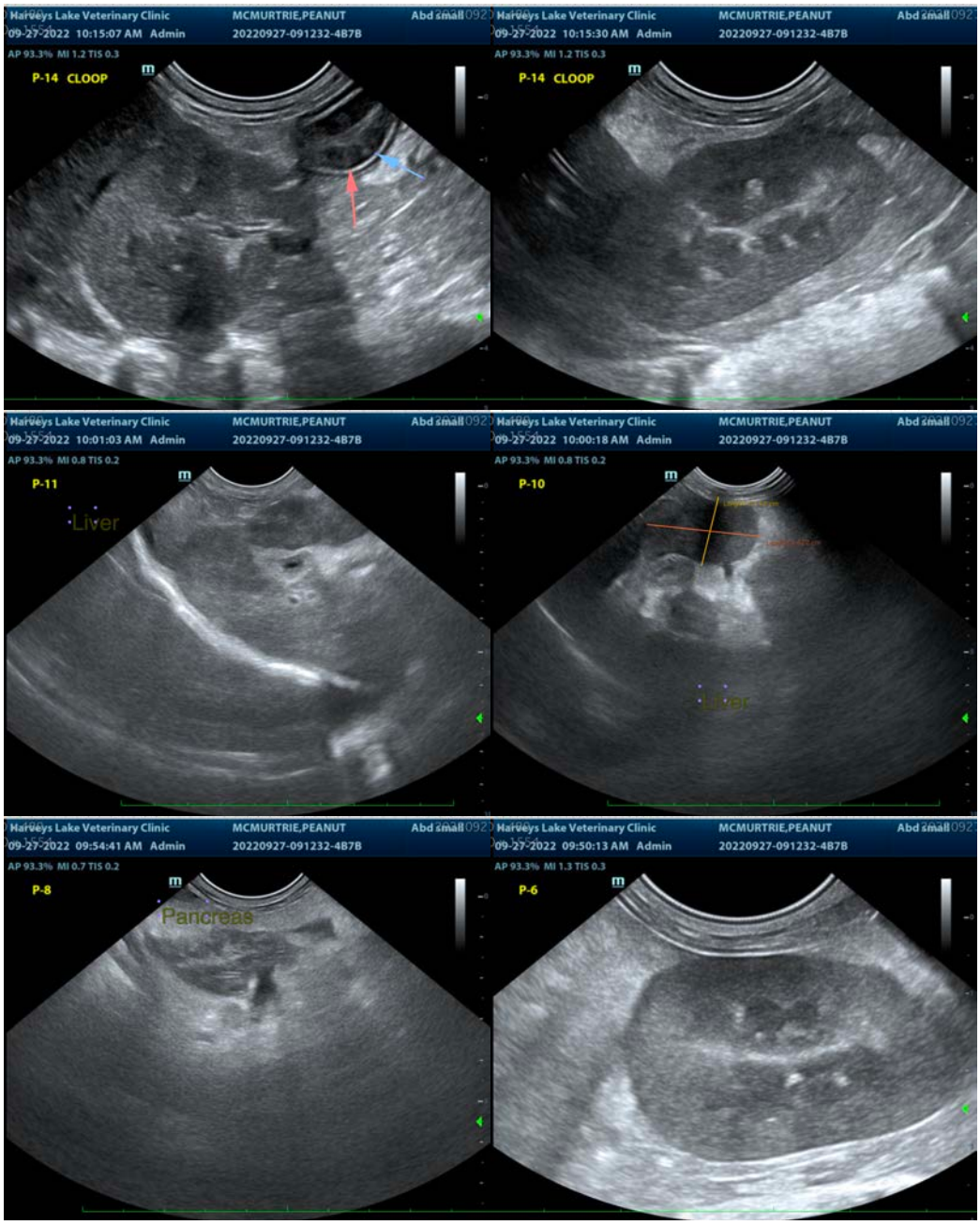

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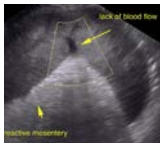
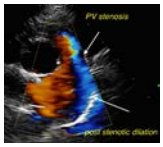
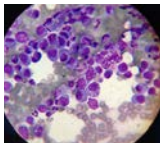
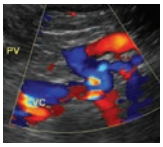

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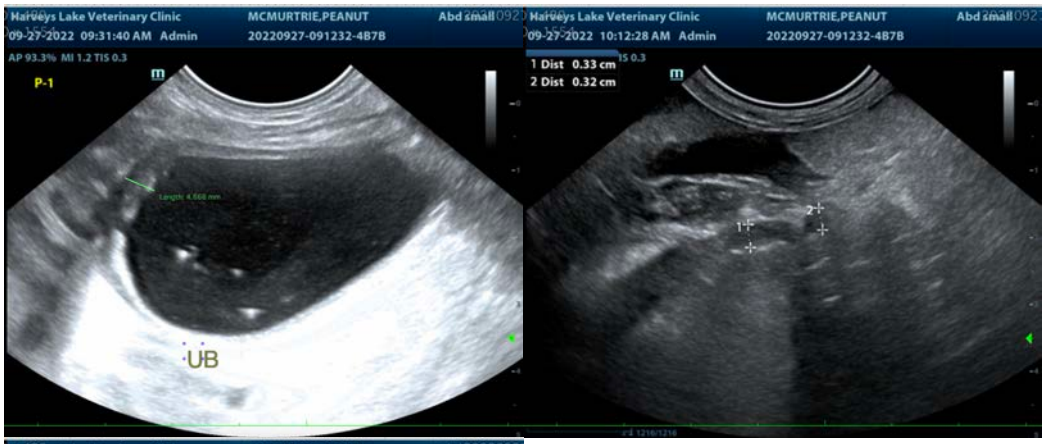

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com