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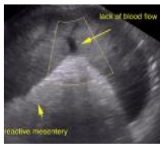
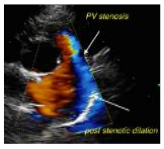
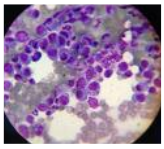
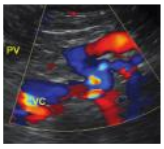





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Charlie Townley

SPECIES

Feline

BREED

DSH

SEX

M/N

AGE

16 years

WEIGHT

2.75 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Patti Mayfield DVM

HOSPITAL NAME

Bend Animal Emergency & Specialty Center

REFERRING VET

Debbie Putnam DVM

INVOICE

17078

DATE

8/26/22

PRESENTING CLINICAL SIGNS

Charlie presented to BAESC Referral US for AUS due to progressive weight loss, recent elevations in liver enzymes, and because of a mild amount of ascites detected on a recent, brief AUS. PPH: Charlie had an AUS performed in July, 2020 with the following findings: Abdominal ultrasound revealed no masses. There is 1 loop of intestine that was thicker than normal. This is the only loop that could be measured as Charlie has eaten this morning. The liver appears normal and there is no evidence of lymphadenopathy. Charlie does have a mild increase in pancreatic echogenicity which can indicate previous episodes of pancreatitis Aspirate of liver: Mild hepatocellular vacuolization with mild neutrophilic and lymphocytic inflammation Patient was treated with Cerenia, Mirtazapine and a short course of prednisolone (~1 or 2 months total). Over the last 2 years, Charlie has remained stable, but has been losing significant amounts of weight. He is now icteric and intermittently anorexic. Recent Exam (8/24/22): Abdominal radiograph revealed an enlarged liver particularly on the right. Poor abdominal detail. small renoliths in the left kidney. the urinary bladder is not clearly visible Lung fields appear clear.

Abnormal PE/Chem/CBC/UA Results: PE: Very thin, cachectic, BCS: 1-2/9, mild icterus, advanced POD, slightly dehydrated, hepatomegaly appreciated on abdominal exam. Dull/unkempt coat. Overall musculoskeletal stiffness. 8/24/22: ABD. RADS: Abdominal radiograph revealed an enlarged liver particularly on the right. Poor abdominal detail. small renoliths in the left kidney. the urinary bladder is not clearly visible Lung fields appear clear. AFAST: 2mm sliver of fluid adjacent to the cranial pole of the bladder. There is a small 4mm pocket of fluid between 2 lobes of the liver and a third pocket of fluid next to the spleen. Entire liver appears irregular Blood work 8/24/22: CBC: - RBC 5.02 (7.12-11.46) R/O hemorrhage (TP does not support this and PLT are normal) vs anemia of chronic disease - HCT 24 (28-52) R/O hemolysis, decreased production, hemorrhage - HGB 7.7 (10.3-16.2) - WBC 22,100 with neutrophilia and monocytosis - PLT 194,000 CHEM - SDMA 17 (0-14) Renal insufficiency - ALT 634 (27-158) R/O hepatocellular inflammation - AST 300 (16-67) - ALP 394 (12-159) R/O Cholestasis, Cushings - GGT 17 (0-6) R/O cholestasis - TBILI 4.2 (0-0.3) (R/O hemolysis vs cholestasis - CHOL 416 (91-305) - Glob 6.3 (3-5.9) R/O chronic immune stimulation - TP 9.2 (6.3-8.8) - CL 109 (114-126) - USG 1.016 with 1+ Protein, no glucose or evidence of infection 8/25/22: US-guided abdominocentesis performed; yellow, slightly cloudy fluid appreciated. TP: 4.5 g/dL

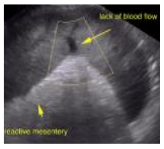
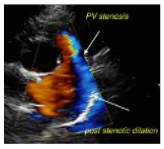
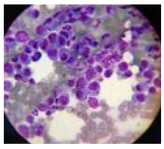
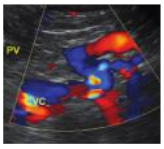
ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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 was noted.

Normal size and margination were 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 3.7 cm in length. Minor dystrophic medullary mineral was present in the right kidney.

Adrenal Glands

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The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.31 cm.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.29 cm.

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 0.81 cm.

Liver/ Gallbladder

The liver was moderate to severely enlarged with areas of asymmetrically swollen capsule contour. Generalized nonhomogeneous irregular parenchyma was noted, exhibiting intermittent to multiple isoechoic to nonhomogeneous macronodules to small intraparenchymal mass lesions. An example measured approximately 3.0 cm in diameter. Concurrent intermittent thinly walled intraparenchymal cysts were present containing anechoic fluid.

The gallbladder was nondistended with mildly hyperechoic to thickened gallbladder walls. Anechoic content was present with mild nondependent mildly hyperechoic luminal debris. The common bile duct exhibited moderate yet variable dilation extending caudally, potentially to the level of the pancreas and duodenal papilla. Common bile duct dilation measured 0.71 cm in width. Anechoic content was present in the common bile duct.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

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.

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

Pancreas

The pancreas exhibited prominent to mildly swollen appearance, exhibiting primarily maintained symmetrical capsule contour and mildly nonhomogeneous to hypoechoic parenchyma compared to adjacent omentum.

Free Abdomen

Mild to moderate volume primarily anechoic free fluid was noted with regional perihepatic to generalized cranial abdominal mildly hyperechoic mesentery.

Intermittent, mildly prominent to enlarged mesenteric and medial iliac lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). An example of medial iliac lymph node measured 1.6 cm x 0.42 cm.

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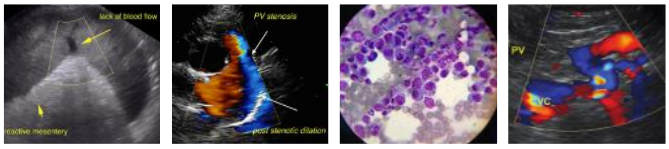

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Severely heterogeneous to irregular liver with intermittent to multiple isoechoic macronodules to small masses
- Chronic cholecystitis pattern with concurrent moderate to variable common bile duct dilation
- Chronic active pancreatitis
- Moderate volume peritoneal free fluid

Secondary Findings

- Mild chronic renal changes with minor dystrophic right kidney medullary mineral

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The diffuse hepatic changes are nonspecific with considerations including chronic cholangitis/cholangiohepatitis with parenchymal remodeling, areas of nodular hyperplasia, fibrosis, hematopoiesis, infiltrative neoplasia or other hepatopathy. Given the hepatic presentation, infiltrative neoplasia is of primary concern yet not definitive. The common bile duct dilation may be secondary to age-related common bile duct changes, which at times may cause lethargy and anorexia, chronic cholangitis or the possibility of emerging common post hepatic obstruction.

Further assessment may include, assuming normal clotting status, screening hepatic FNA using a 25-gauge needle for cytology as well as a spec fPL. Empirical therapy for chronic severe cholangiohepatitis with monitoring of clinical response and potential recheck sonogram if increasing evidence of peritoneal free fluid would be a more conservative approach.

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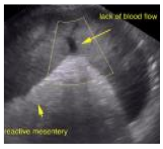
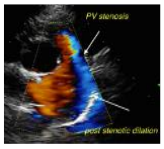
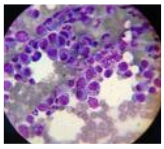
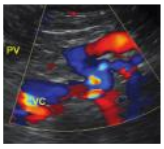

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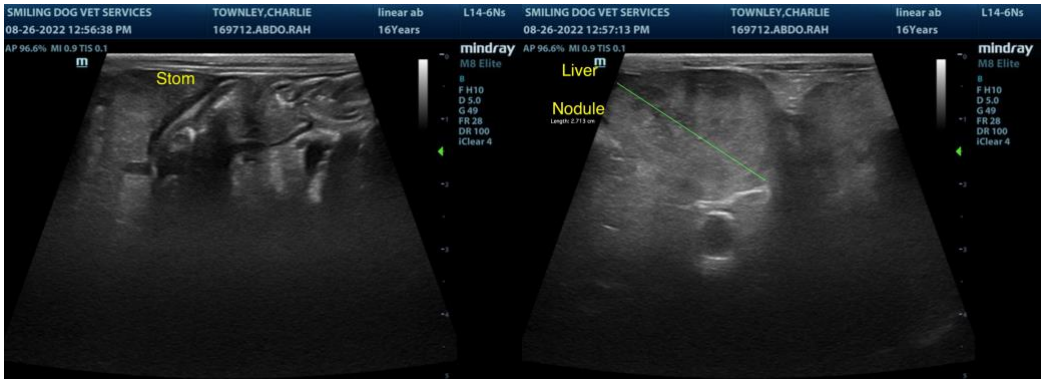

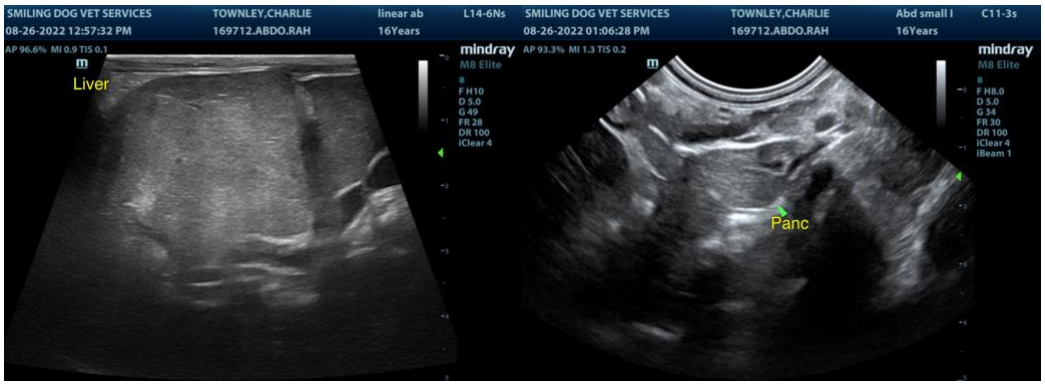

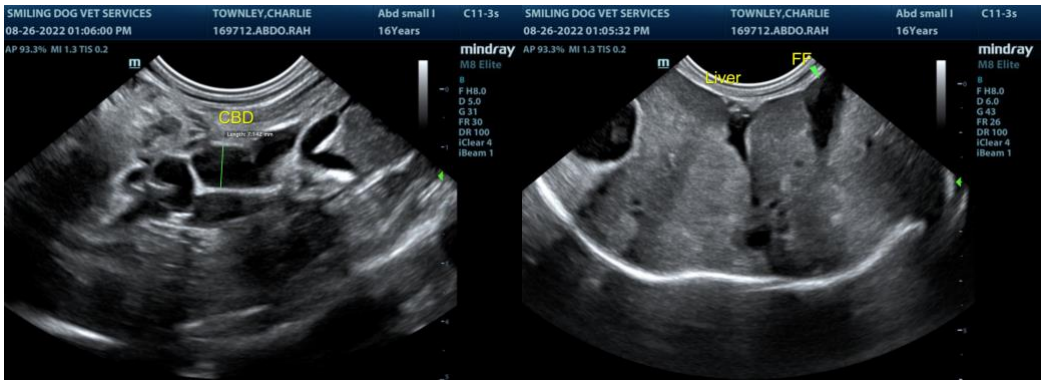

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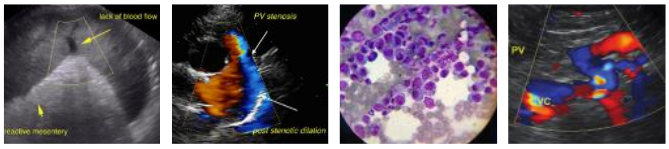

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com