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Clinical Sonography & Telecytology
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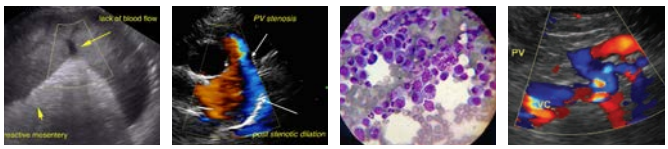

SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Chuck Kolar

SPECIES

Canine

BREED

Scottish Terrier

SEX

Neutered Male

AGE

8 Years

WEIGHT

37.3

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Val Shumskaya

HOSPITAL NAME

Newton Vet Hospital

REFERRING VET

Dr. Wyman

INVOICE

46257

DATE

3/29/23

PRESENTING CLINICAL SIGNS

Was diagnosed with scottish temer vacuolar hepatopathy. last ultrasound 2021. Asymptomatic Abnormal PE/Chem/CBC/UA Results: AST 93 (15-66), ALT 716 (12-118), was 483, T4 2.2 (0.8-3.5), ALKP 5264 (5-131) was 2172, GGTP 24 (1-12), Chol 535 (92-324)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is normal in size (0.83 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (5.29 cm). Overall echogenicity is slightly hyperechoic with mildly reduced corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.38 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.58 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.71 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a small hypoechoic mass effect/nodule visualized in the left side of the liver measuring 2.72 cm x 3.03 cm.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation.

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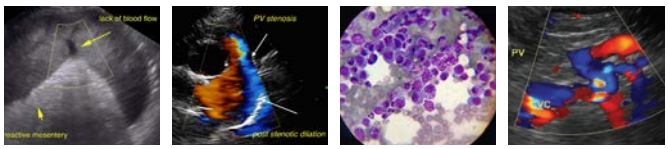

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Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

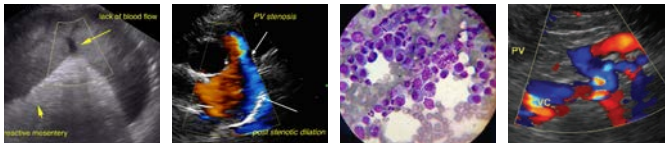
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Mildly reduced corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Heterogeneous liver with hypoechoic mass effect/nodule – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. There is a focal hypoechoic nodule/mass visualized in the parenchyma. This could represent a large benign lesion such as a regenerative nodule, etc., or it could represent an early neoplastic lesion.
- Large, distended gallbladder with a large amount of echogenic debris – A large amount of debris is evident in the gall bladder with no evidence of a mucocele or associated inflammation at this time. This could represent an early mucocele or cholestasis, with minimal evidence of associated inflammation at this time. Continued monitoring of labwork and ultrasound are warranted for progression of this lesion. Ursodiol therapy could be considered.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes observed in the liver are non-specific and could be consistent with a vacuolar hepatopathy. Additionally, there is a hypoechoic nodule/mass effect visualized on the left side of the liver. This could represent an early mass lesion, a large benign nodule, etc. If possible, consider a fine needle aspirate (provided coagulation parameters are normal). Other options would include continued monitoring with ultrasound for progression of this lesion, or a contrast CT scan to further evaluate and consider surfical removal (I would think a recheck ultrasound in 3-4 months would be reasonable).



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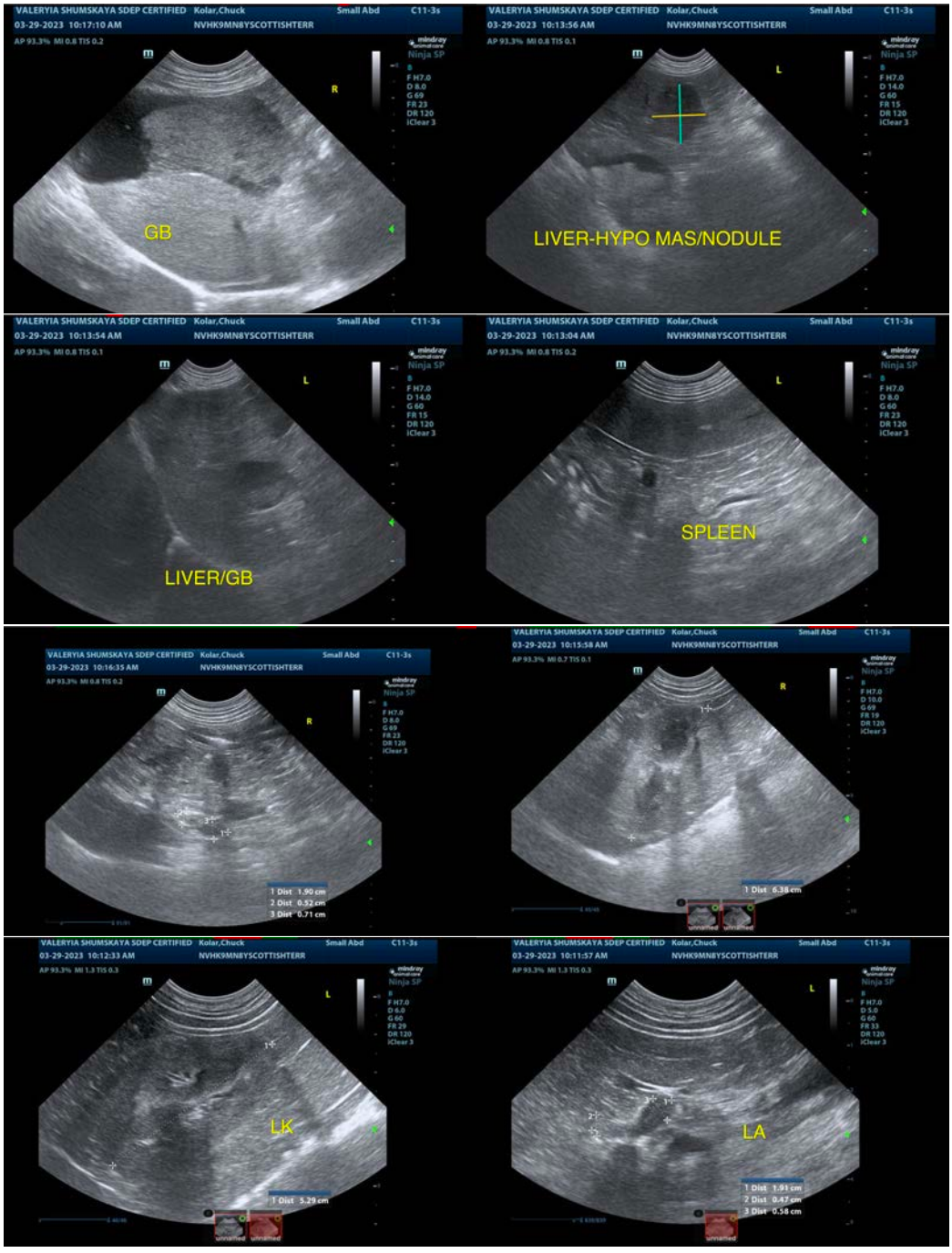
If this was confirmed as a vacuolar hepatopathy with a biopsy, this tends to be a relatively slowly progressing process, although in some severe cases it can progress to liver failure. Recommend pre- and post-prandial bile acids to assess liver function. I would also consider chronic Denamarin therapy and starting Ursodiol for its hepatoprotective effects and due to the large amount of debris in the gallbladder. Recommend continued monitoring of the gallbladder for possible progression of this lesion into a mucocele.



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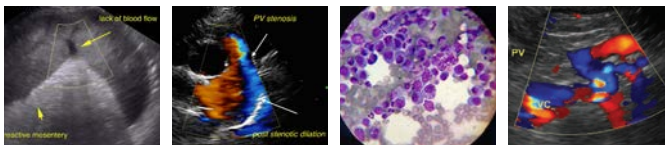

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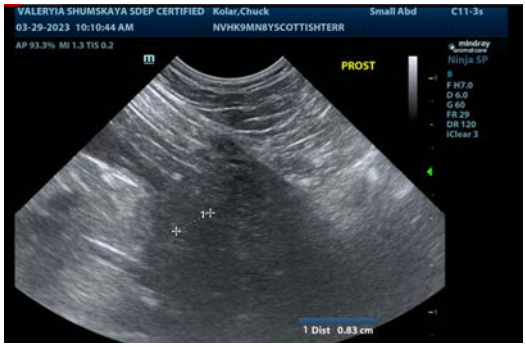

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com