SonoPath
Clinical Sonography & Telecytology
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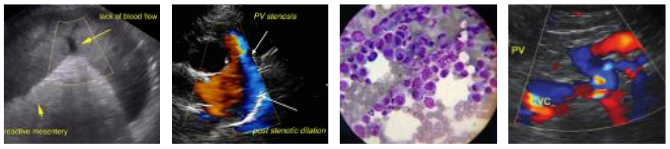


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Nutmeg Westra

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Spayed Female

AGE

14 years

WEIGHT

4 kg

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Erin Wicks

HOSPITAL NAME

Shores VEC

REFERRING VET

Dr Law

INVOICE

14119

DATE

8.16.23

PRESENTING CLINICAL SIGNS

History: Presented at our hospital for AUS. Increasing Liver values for past couple of years. Took pet in for dental, did pre anesthetic bloodwork and values had increased significantly, suspected Cushing's, rec AUS. Pet is now panting more than normal and appetite is increased.

Previous Health Concerns: hx of elevated liver values, cataracts, increased light sensitivity. Current Medications: eye meds Appetite/When did they eat last: 530am Diet: Science diet W/d, just switched to metobolic

Abnormal PE/Chem/CBC/UA Results: rDVM labs: 8/2/23: ALT 127; ALKP 355; GGTP 106; BUN/CREA ratio 50; Magnesium 2.7; Na 6.0; NA/K ratio 24; Chol 404; Trigly 932; PSL 238; PLT 428; NEU 59; LYM 32; UA: pH 5.0 Rdvm labs: 7/18/22: ALKP 281; Tbili 0.4; BUN/CREA ratio 35; Chol 405; Trigly 1334; PSL 162; UA: SG 1.012; pH 7.5

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is mildly to moderately distended. A small amount of echogenic debris is observed within the lumen. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

The left kidney is normal in size (4.30 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. Several, small, nonobstructive nephroliths are visualized. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (4.34 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. Several, small, nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is borderline enlarged (0.44 cm at cranial pole) (0.52 cm at caudal pole) (1.46 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

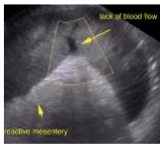
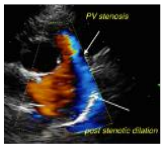
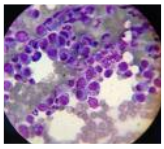
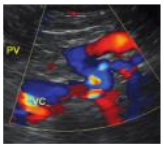
The right adrenal gland is enlarged (1.31 cm at cranial pole) (0.65 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.00 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A few, small, ill-defined myelolipomas are seen. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged. At least two liver lobes on the right side are swollen with a questionable mass effect. The parenchyma is isoechoic relative to the spleen and diffusely mottled in appearance, with several ill-defined hypoechoic nodules/areas (the largest measuring 1.17 cm in its

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longest dimension). At least one, small hyperechoic nodule is also seen on the left side. A 0.39 cm cyst is also seen on the right side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of gravity-dependent, echogenic-to-mineralized debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

There is no obvious evidence of free fluid. A 1.01 x 0.87 cm multiseptated cystic lymph node is observed in the right midabdomen.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The hepatic changes, including the liver lobe swellings, could be consistent with a benign process (i.e., vacuolar hepatopathy, regenerative nodular hyperplasia). Alternatively, emerging neoplasia or other hepatopathies are possible.
- Mild bilateral adrenomegaly

Secondary Findings

- Gall bladder debris, non-mucocele
- Bilateral chronic renal changes with nonobstructive nephrolithiasis
- Minor age-related pancreatic remodeling
- The cystic lymph node in the right mid-abdomen is likely a benign incidental finding, with a lower possibility of emerging neoplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Confirmation with the owner that the eye medications do not contain corticosteroids is recommended. If there is no evidence of exogenous corticosteroid use, consider further testing for Cushing's disease (i.e., low-dose dexamethasone suppression test or ACTH stimulation test).

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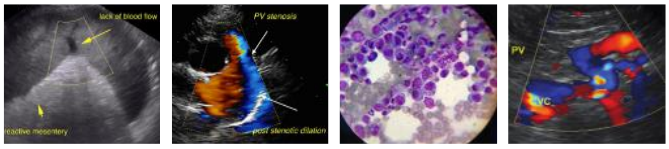

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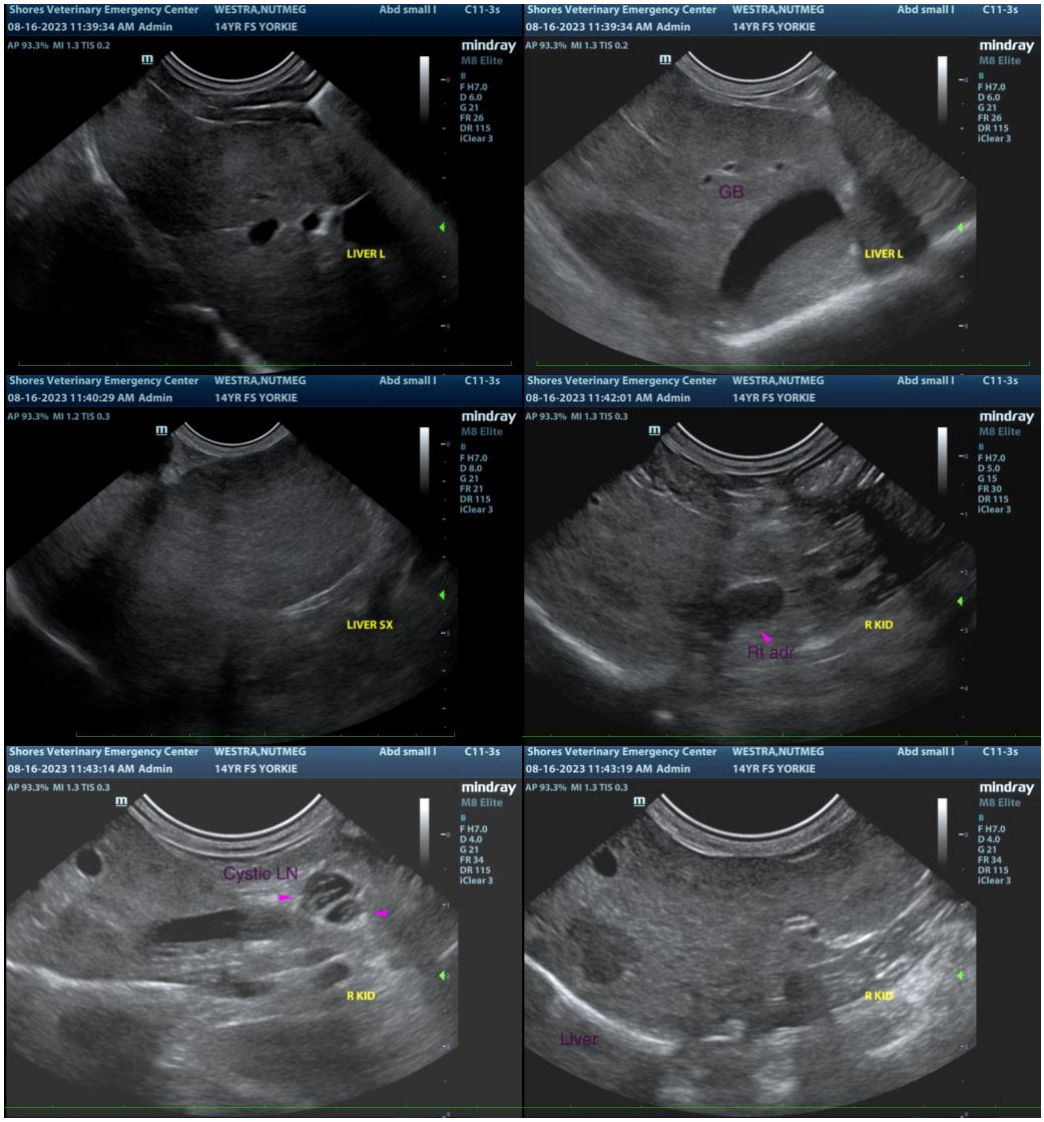
- Regarding the hepatic changes, consider fine-needle aspirates (if clotting status is appropriate). Twenty-five gauge-needles should be used. If hepatic tissue sampling is not performed at this time, consider a repeat ultrasound in 1-2 months to assess for changes in the hepatic parenchyma. Pre- and post-prandial serum bile acids can also be considered to assess hepatic function.



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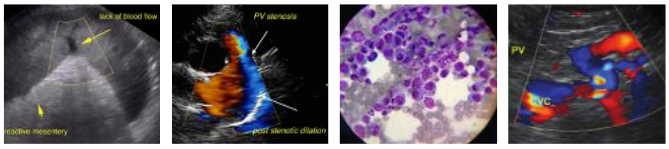

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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