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Clinical Sonography & Telecytology
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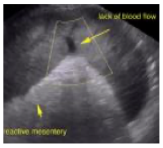
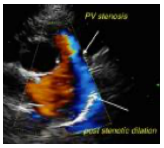
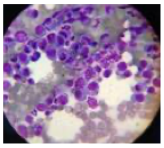
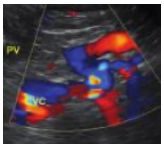

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1-800-838-4268 info@sonopath.com

PATIENT

Gus Usher

SPECIES

Canine

BREED

Beagle

SEX

Neutered Male

AGE

9 years, 4 mos

WEIGHT

34 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

M. Kermendy, CVT

HOSPITAL NAME

Wauwatosa Vet

REFERRING VET

Elaine Binor, DVM

INVOICE

11559

DATE

8.31.22

PRESENTING CLINICAL SIGNS

History: History of renal disease and PLN. Most recent blood work indicated anemia, mild azotemia, and mild hypercalcemia present. UPC has significantly improved. Abdominal imaging today to check the renal status and confirm renal disease changes. Also to rule out other causes of anemia such as neoplasia. Currently on Telmisartian, Amlodipine, and Benazepril. He has also lost weight. On a renal diet.

Abnormal PE/Chem/CBC/UA Results: HCT=32.9 (37.3-61.7) BUN=45 (7-27) Creatinine=2.2 (0.5-1.8) UPC=2.53 (<0.5) Calcium=12.3 (7.9-12) Blood pressure =130-132mmHg

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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

The **prostate** is normal in size (1.47 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The **left kidney** is normal size (4.61 cm in length); with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few, small, cortical cysts are seen. The cortex is hyperechoic. There is no evidence of pyelectasia, infarcts or hydronephrosis.

The **right kidney** is normal size (5.32 cm in length); with a slightly irregular shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few cortical cysts are seen. The cortex is hyperechoic. There is no evidence of pyelectasia, infarcts or hydronephrosis.

Adrenal Glands

The **left adrenal gland** is normal size (0.52 cm at cranial pole) (0.65 cm at caudal pole); normal shape; 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 normal size (1.01 cm at cranial pole) (0.50 cm at caudal pole); normal shape; 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 (0.97 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The **liver** is subjectively prominent to enlarged with slightly irregular peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely heterogenous in appearance. A 5.55 x 3.36 cm irregular, hyperechoic to heterogenous mass, with ill-defined areas of cavitation is observed at the caudal aspect. In addition, a 1.04 cm cystic lesion is observed at the cranial pole, near the diaphragm. 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 moderate amount of aggregated, echogenic suspended sludge in a partially stellate pattern 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 mildly distended with ingesta. 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 segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. The colonic lumen contains shadowing fecal material. There is no evidence of an obstructive pattern.

Pancreas

The base and right limb of the **pancreas** are visible with normal curvilinear peripheral contours. The parenchyma is largely hyperechoic 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 evidence of free fluid. The abdominal **lymph nodes** are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Caudal hepatic mass. Neoplasia (i.e., adenoma, adenocarcinoma, round cell tumor) is considered likely with a lower possibility of a benign process (regenerative nodular hyperplasia). The diffuse hepatic parenchymal changes are nonspecific and are most consistent with a benign hepatopathy (i.e., vacuolar hepatopathy, regenerative nodular hyperplasia) with a lower possibility of metastatic or inflammatory disease. Correlation with the patient's liver values is recommended.

- The bilateral renal changes in conjunction with the clinical history are consistent with a protein-losing nephropathy (PLN). Most PLNs are idiopathic. However, they can be secondary to infectious, inflammatory or neoplastic diseases.

- The gall bladder changes are consistent with a developing mucocele.

Secondary Findings

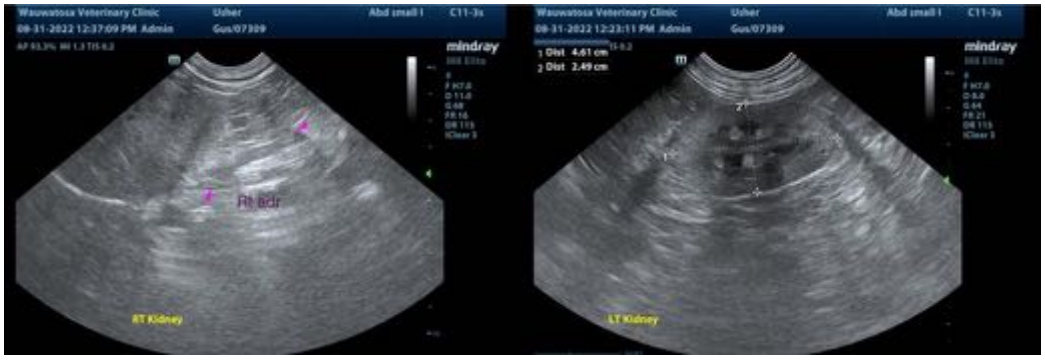
- The bladder wall changes are suggestive of cystitis. Correlation with the patient's urinalysis findings is recommended.

- Age-related pancreatic remodeling with fibrosis. Mild chronic pancreatitis is also possible, particularly if the patient exhibits pain on cranial abdominal palpation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Regarding the hepatic mass, three-view thoracic radiographs are recommended to assess for pulmonary metastatic disease. If there is no evidence of neoplasia in the chest, consider hepatic mass removal with submission for histopathology. The gall bladder should also be evaluated at the time of surgery and removed if indicated. In the meantime, consider initiation of Ursodiol therapy, with serial sonographic monitoring (i.e., every 6-8 weeks) to assess for progression to a fully-formed mucocele.

Regarding the renal disease, continued therapy for PLN is recommended. Also consider initiation of omega-3 fatty acids +/- an antithrombotic agent (i.e., clopidogrel).



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.

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