



PATIENT

Diggy Perry

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Neutered Male

AGE

9 years

WEIGHT

19.5 lbs

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Jessica Bailes

HOSPITAL NAME

All Creatures Great &
Small VC, Corvallis, OR

REFERRING VET

Dr. Chantal Litalien

INVOICE

10827

DATE

4/28/22

PRESENTING CLINICAL SIGNS

History: Chronic hx of elevated ALP, isosthenuria and elevated UPC; systemic hypertension noted 2/22. On enalapril 7.5mg PO BID currently.

Abnormal PE/Chem/CBC/UA Results: Anxious, otherwise nSF on PE BW: increased ALP (246), increased UPC @ 6.7. Initial BP was hypertensive @ 282 systolic Enalapril started @ 5mg PO BID BP improved to 180 systolic Just increased enalapril to 7.5mg PO BID 4/14/22.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and the visible of the proximal urethra are normal.

The prostate is normal in size (0.89 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (4.71 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. At least one, tiny cortical cyst is visualized. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal in size (5.11 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. At least one, tiny cortical cyst is visualized. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is borderline enlarged (0.43 cm at cranial pole) (0.67 cm at caudal pole) (1.97 cm in length); 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 (0.37 cm at cranial pole) (0.51 cm at caudal pole) (1.88 cm in length); 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 (1.43 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 enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely heterogenous in appearance, with numerous, small, ill-defined hypoechoic nodules/areas. 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 scant amount of gravity dependent, echogenic debris is observed within the lumen. The cystic and common bile ducts are normal.

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 small intestinal lumen is not dilated. 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. No obstructive or overt infiltrative disease is noted.

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

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The clinical history, in conjunction with the bilateral renal changes are consistent with a protein-losing nephropathy. Glomerulonephritis and amyloidosis are the top differentials. Most cases of protein-losing nephropathy are idiopathic. However, they can occasionally be associated with underlying neoplastic infectious or inflammatory diseases.
- The hepatic parenchymal changes are nonspecific and may be secondary to benign process (i.e., regenerative nodular hyperplasia and/or vacuolar hepatopathy). However, infiltrative neoplasia (i.e., round cell tumor) cannot be completely excluded.

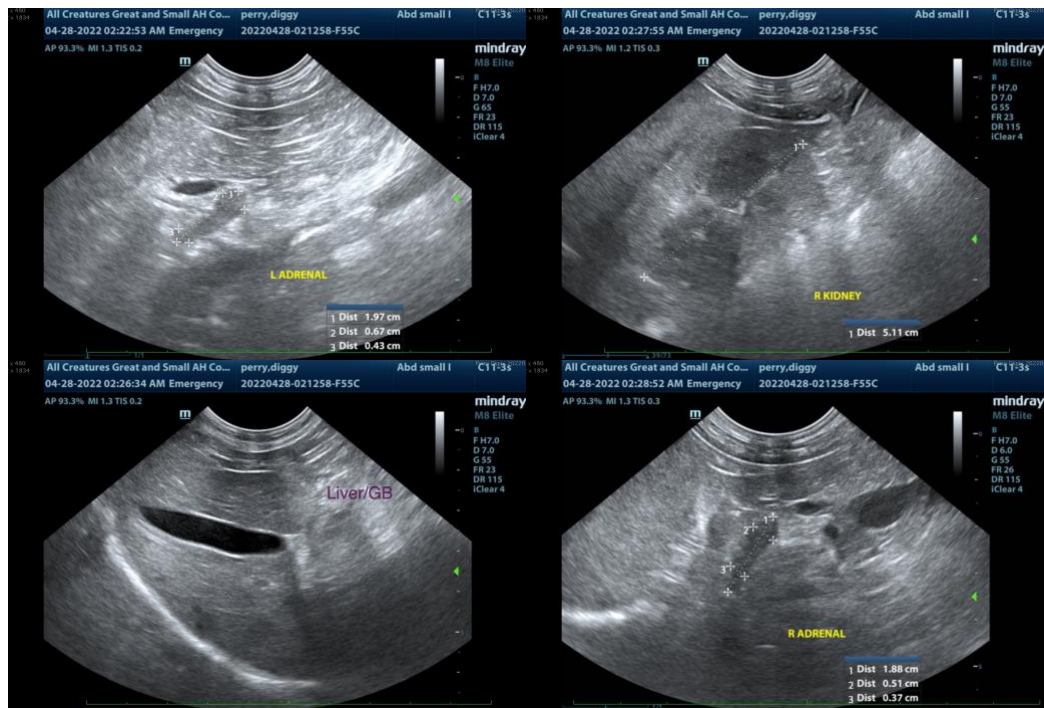
Secondary Findings

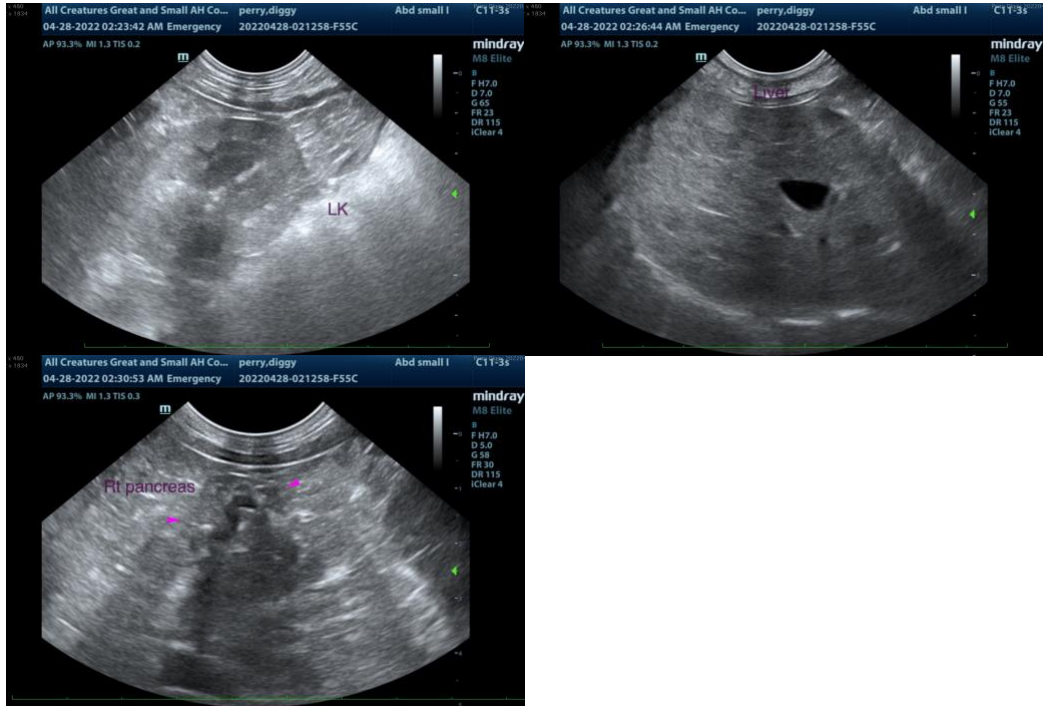
- Borderline left adrenomegaly
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, chronic pancreatitis +/- fibrosis. Mild, chronic pancreatitis may also be present. Correlation with the patient's clinical history is recommended.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Regarding the protein-losing nephropathy, consider the following:
 1. Three-view thoracic radiographs
 2. Infectious disease testing (i.e., tick-borne, heartworm, Leptospirosis, urine culture and sensitivity).
 3. If the patient's UPC does not improve with an ACE inhibitor, consider initiating an angiotensin receptor blocker (i.e., telmisartan)
 4. Antithrombotic (e.g., clopidogrel at 2.5 mg/kg PO q 24 hours)
 5. Omega-3 fatty acids (65 mg/kg of DHA and EPA combined daily)
 6. Prescription renal diet
 7. Routine monitoring of UPC, blood pressure and bloodwork (CBC, chemistry panel) to assess for progressive disease

- Regarding the hepatic changes, fine-needle aspirate can be considered to assess for round cell neoplasia. It should be noted that cytologic evaluation is not typically diagnostic for hepatopathies such as inflammatory disease, primary hepatic tumors (i.e., adenoma, adenocarcinoma) or hyperplastic change.





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, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com