

IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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

DATE PRESENTING CLINICAL SIGNS

12/3/21

History: P has proteinuria noted since July (originally with an inactive sediment though recently had an active sediment) and hypertension. Had been on Proin for urinary incontinence, switched to Incurin in July. P also started on benazepril. Still noting large amount of protein in urine. Hypertension improved but still elevated (160 mmHg). Most recent lab work showed new mild elevations in renal values.

PATIENT

Miley Bratton

SPECIES

Canine

BREED

Labrador Retriever

SEX

Spayed Female

AGE

11/12/12

WEIGHT

99.8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brillhart RDMS

HOSPITAL NAME

Churchville Vet Clinic

REFERRING VET

Dr. Kauffman

INVOICE

33233

Current Medications: Benazepril 20mg - 1 PO BID, Incurin 1mg - 1 tab PO SID, Amoxicillin 400mg #30 (started 11/19) - 1.5 tabs PO BID.

Lab Results: CBC: Mild lymphopenia (suspect stress), Chem: SDMA 16, Crea 1.7, BUN 36, mild hypercholesterolemia, mild amylase elevation, mild CK elevation, Urinalysis: SG 1.036, protein 4+, glu negative, 2-5 WBC/hpf, 2-5 RBC/hpf, rare cocci, no crystals, T4: WNL, 4Dx: all negative.

Date of Previous IntraPet Ultrasound: 5-5-2017.

Sedation: 0.9 mL Butorphanol IV for sedation, add 0.7 mL Dexdomitor IV. Reverse with 0.7 mL Antisedan IM.

Stat Report: Not requested.

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 left kidney has a normal shape and size (7.04 cm) with mild pyelectasia (0.35 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.24 cm) with mild pyelectasia (0.29 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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/borderline large in size measuring 0.92 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 large in size measuring 1.11 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 are very indistinct hypoechoic nodules visualized throughout the parenchyma.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

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 pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

No free fluid. There are prominent mesenteric lymph nodes visualized at 0.61, 0.54 cm. The omentum is of normal echogenicity.

PRIMARY FINDINGS

- Bilateral adrenal enlargement – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.
- Decreased corticomedullary distinction in both kidneys with mild pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the left/right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Heterogeneous liver with indistinct hypoechoic nodules – 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.

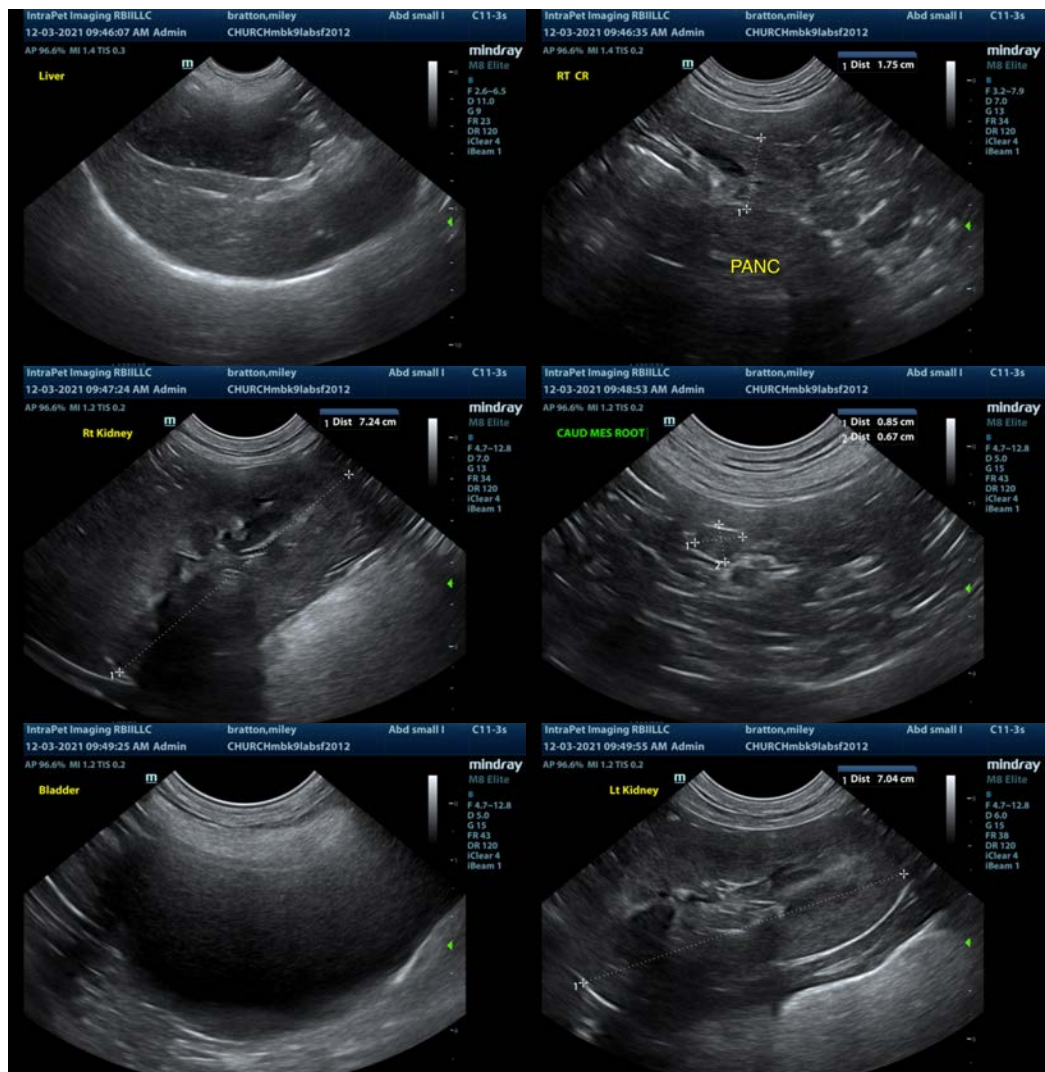
SECONDARY FINDINGS

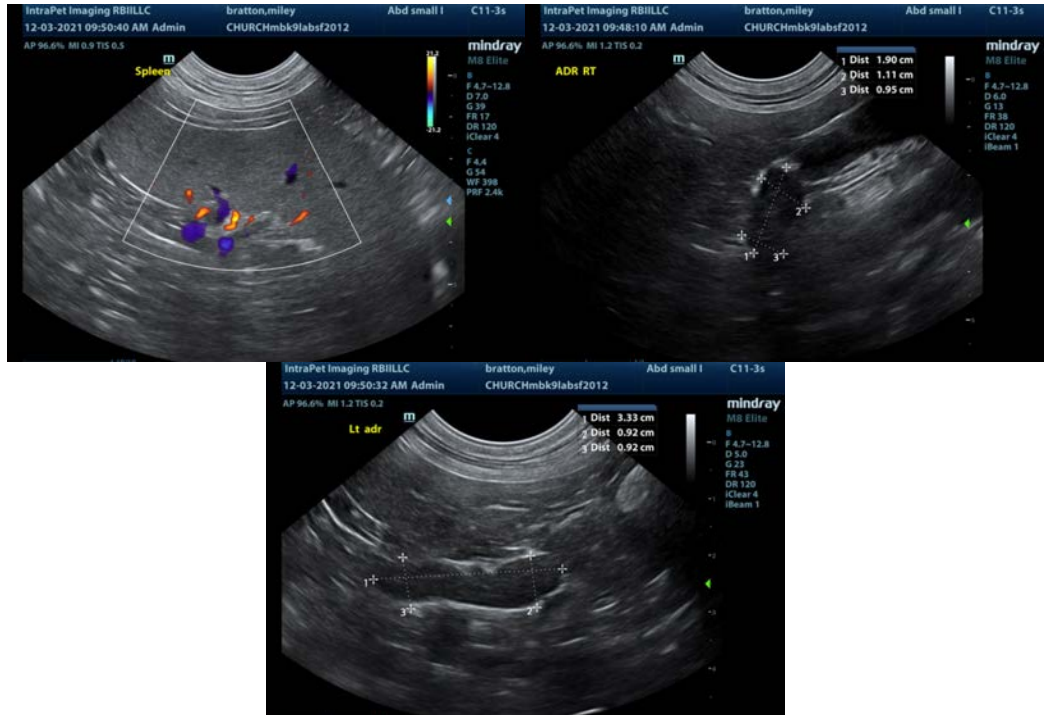
- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Prominent mesenteric lymph nodes – The prominent abdominal lymph nodes are most consistent

with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An obvious focal lesion is not observed to explain the hypertension reported. The adrenal glands are plump bilaterally. If clinical signs and lab work consistent with Cushing's are present, then you could consider adrenal function testing, as this can worsen proteinuria and hypertension. The changes visualized in the kidneys are non-specific, but likely associated with chronic progressive disease. If not already done or done recently, recommend a urine protein/creatinine ratio, urinalysis and urine culture. I typically recommend 3-view thoracic radiographs, vector borne disease testing through NC State's vector borne disease lab (canine comprehensive panel) to look for any infectious causes of glomerulonephritis. This test includes a heartworm test. If no underlying cause is identified, then recommend treatment for idiopathic proteinuria (currently on Benazepril. Additionally, consider starting a renal diet due to the azotemia reported, and I would consider testing for Leptospirosis.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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