


PATIENT

Zipper Williams

SPECIES

Canine

BREED

Spaniel

SEX

MI

AGE

7yr

WEIGHT

24.2kg

INTERPRETED BY

 R. McKenzie Daniel,
 DVM, DABVP
 (Canine and Feline)

IMAGING PERFORMED BY

Patti Mayfield DVM

HOSPITAL NAME

 Emergency Veterinary
 Hospital

REFERRING VET

Patti Mayfield DVM

INVOICE

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DATE

01/03/2023

PRESENTING CLINICAL SIGNS

Zipper presented to EVH on 1/2/23 for evaluation of progressive lethargy, vomiting and anorexia; with significant change in the last 4 days. Clients report that he has demonstrated lethargy and intermittent vomiting for the last 2 months (vomits 2 x/week), but over the last 3-4 days, the vomiting has increased significantly and Zipper has refused all food. Significant weight loss has been noted. No SD noted. Patient has been coughing softly for the last several days, non-productive. No known Toxins, no travel, no observed ticks, no exposure to fish. The patient has a decent amount of acreage upon which he lives. No river access or stagnant water on the property. Zipper was evaluated at Willakenzie on Friday (12/30/22) and blood work and SQF, Cerenia and Provable were dispensed. Clients are uncertain of the working diagnosis. Clients state an AUS was performed ~ 4 weeks ago, at which point they believe kidney disease may have been documented. The primary care veterinary clinic is currently closed and records are not currently available. CURRENT TREATMENTS: -- IV catheter -- Cerenia 1 mg/kg IV (24.2 mg) -- LRS bolus 600 mL/1 hour, then reduced to 80 mL/hr -- Enrofloxacin 10 mg/kg (242 mg) IV q 24 hours -- Unasyn 30 mg/kg (726 mg) IV TID

Abnormal PE/Chem/CBC/UA Results: PE (1/2/23): Dull, obtunded, hypothermic (98.1 F). ~7-8% dehydration with light pink/tacky mm's. Mild dental tartar. Soft and supple abdomen. Mild prostatomegaly, with possible increased swelling on the right hemisphere. Mild pain appreciated. patient requires assistance to stand. Obvious weight loss with prominent dorsal spinous processes and expaxial wasting. No obvious cervical neck/paraspinal or joint pain. 1/2/2023: 1.) CBC: - Normocytic, normochromic, non-regenerative anemia; RBC: 4.35 M/uL (5.65-8.87) HCT: 27.6 % (37.3-61.7) HGB: 10.4 g/dL (13.1-20.5) Retic: 7.8 K/uL (10-110) - PCV/TP: 28%/8.4 g/dL - Mild lymphopenia, 520/uL (1050-5100) 2.) CHEM: - Creatinine: >13.6 mg/dL (0.5-1.8); dilution: 10.9 mg/dL - BUN: >130 mg/dL (7-27); dilution: 182 mg/dL - PHOS: >16.1 mg/dL (2.5-6.8); dilution: 17.2 mg/dL - Hypercalcemia, 12.3 mg/dL (7.9-12.0) - Amyl: 2157 U/L (500-1500) - LIPA: 5766 U/L (200-1800) 3.) 3-VIEW THORACIC RADS: - Normal cardiac silhouette to subtle microcardia and decreased caudal vena cava diameter consistent with dehydration/hypovolemia. Skeletal structures are appropriate. No esophageal or mediastinal abnormalities. No pleural effusion, nor nodular or congested alveolar changes that would suggest primary, metastatic neoplasia or bronchopneumonia, respectively. NSF 4.) 3-VIEW ABDOMINAL RADS: - Diaphragm intact, and no indication of abdominal wall hernia. Skeletal structures are wnl. No evidence of ascites, nor significant loss of serosal detail. Mild gas within the stomach, however no dilation/distention, nor obvious FB/obstruction. Loops of SI are mostly fluid filled, with very little gas and no profound dilation/distention, nor obvious FB/obstruction. Mild gas within the colon. Margins of spleen and liver appear wnl. Urinary bladder moderate sized, no obvious cystic or renal calculi. Prostate not visualized. NSF 5.) Urine analysis (in-house), via cysto; SediVue: - strawm clear, USG: 1.012, pH: 6.5 - proteinuria, 30 mg/dL - hematuria (mild), 3/HPF - pyuria, >50 WBC/HPF - bacteriuria, cocci present & rods suspected - No cast & no crystals - Bacterial confirmation test: Cocci are present, no rods detected. 6.) AFAST - No ascites appreciated. Urinary bladder is replete with subtle thickening to the bladder wall. No noted cystic calculi nor masses appreciated. Anechoic urine. The prostate is moderately enlarged with mild asymmetry of the capsule and slight heterogenous parenchyma. There are several small, multifocal hypoechoic areas. The area of the aortic trifurcation is unremarkable. The left and right kidneys retain symmetrical shape, but demonstrate loss of detail of the corticomedullary junction with decreased medullary cavities. The cortex has a hyperechoic parenchyma bilaterally. Bilateral adrenal glands retain symmetry and appear to have normal size, shape, and vasculature. The spleen retains normal shape, without any obvious intraparenchymal masses. Vasculature appears normal. There are several small, intraparenchymal hypoechoic lesions. Stomach and loops of SI retain normal wall thickness and there is mild-moderate gas, but no obvious FB or obstruction. Pylorus is empty. The pancreas appears isoechoic to surrounding fat with no obvious pathology. The liver remains symmetrical with no obvious pathology or lesions. The gallbladder is moderately distended and has a significant amount of sludge, but no



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obvious wall thickening. Cannot r/o emerging mucocele. -- Urine C/S (prior to ABX) submitted to IDEXX

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ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

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Urinary System

Canine

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

BREED

Spaniel

The bilateral kidneys exhibited asymmetric margination with mild to variable non-homogenous to mild mixed echogenic cortical hypertrophy and moderate loss of corticomodullary definition. Reduced medullary volume and pinpoint areas of medullary mineralization were present. Minor bilateral pyelectasia was present. The left kidney was mildly subnormal in size measuring 5.0 cm in length. The right kidney measured 6.7 cm in length.

SEX

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The area of the aortic trifurcation was free of pathology.

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The prostate was mildly enlarged in size with intact, symmetrical capsule contour. The margins of the gland were intact and able to be differentiated from the surrounding tissue. The prostatic parenchyma was non-homogeneous without parenchymal mineralization. The prostate measured 4.5 cm. Anechoic, thinly walled parenchyma cysts were present.

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Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.63 cm width at the caudal pole and 2.3 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.68 cm width at the caudal pole and 2.1 cm length.

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Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

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Liver/Gallbladder

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The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with mild non-dependent echogenic non-organized debris. Debris is likely secondary to anorexia/fasting and is incidental without evidence of cholestasis. The cystic and common bile ducts were normal.

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Gastrointestinal

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The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. Mild gastric distension with primarily anechoic fluid was present.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

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Normal visible colon wall layers were present with apparent formed feces in lumen.

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Pancreas

SPECIES

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

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Free Abdomen

BREED

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

Spaniel

ULTRASONOGRAPHIC FINDINGS

SEX

- Bilateral nephropathy-suggestive of chronic or possible acute on chronic nephropathy
- Sonographically unremarkable GI tract, likely mild gastritis/uremic gastritis
- Mild prostatomegaly exhibiting mild non-homogenous to cystic parenchyma-probable benign prostatic hyperplasia with minor parenchymal cyst, potential for prostatitis
- Sonographically unremarkable urinary bladder

MI

AGE

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

7yr

Sonographically the appearance of the bilateral kidneys is most suggestive of chronic/acute on chronic nephropathy with evidence of chronic renal changes. Interstitial nephritis, glomerulonephritis, potential pyelonephritis or other is suspected. No evidence of renal neoplastic criteria was present. Correlation with pending urine C/S, baseline UPC +/- leptospirosis titer/PCR if potential exposure is recommended. Empirically diuresis protocol with monitoring of urine output/bodyweight, CRD therapy and assessment of renal response pending additional diagnostics would be reasonable. As needed GI support is recommended. A guarded to very guarded prognosis is indicated given the renal sonographic appearance and degree of azotemia. Potential for end stage renal disease cannot be excluded.

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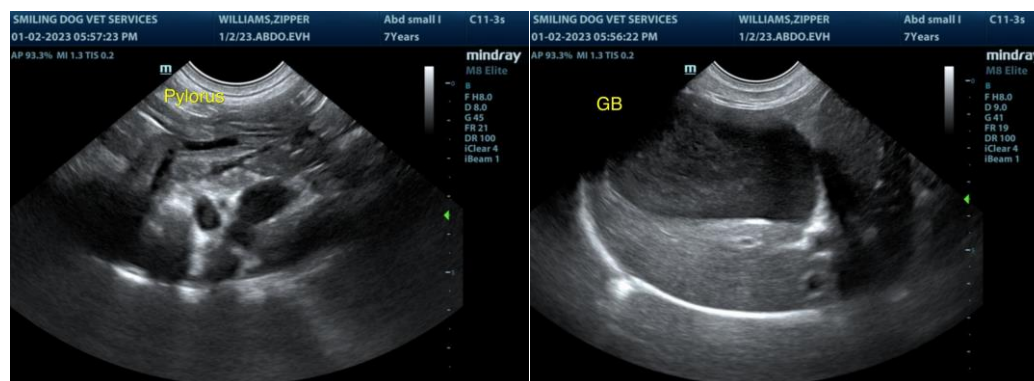
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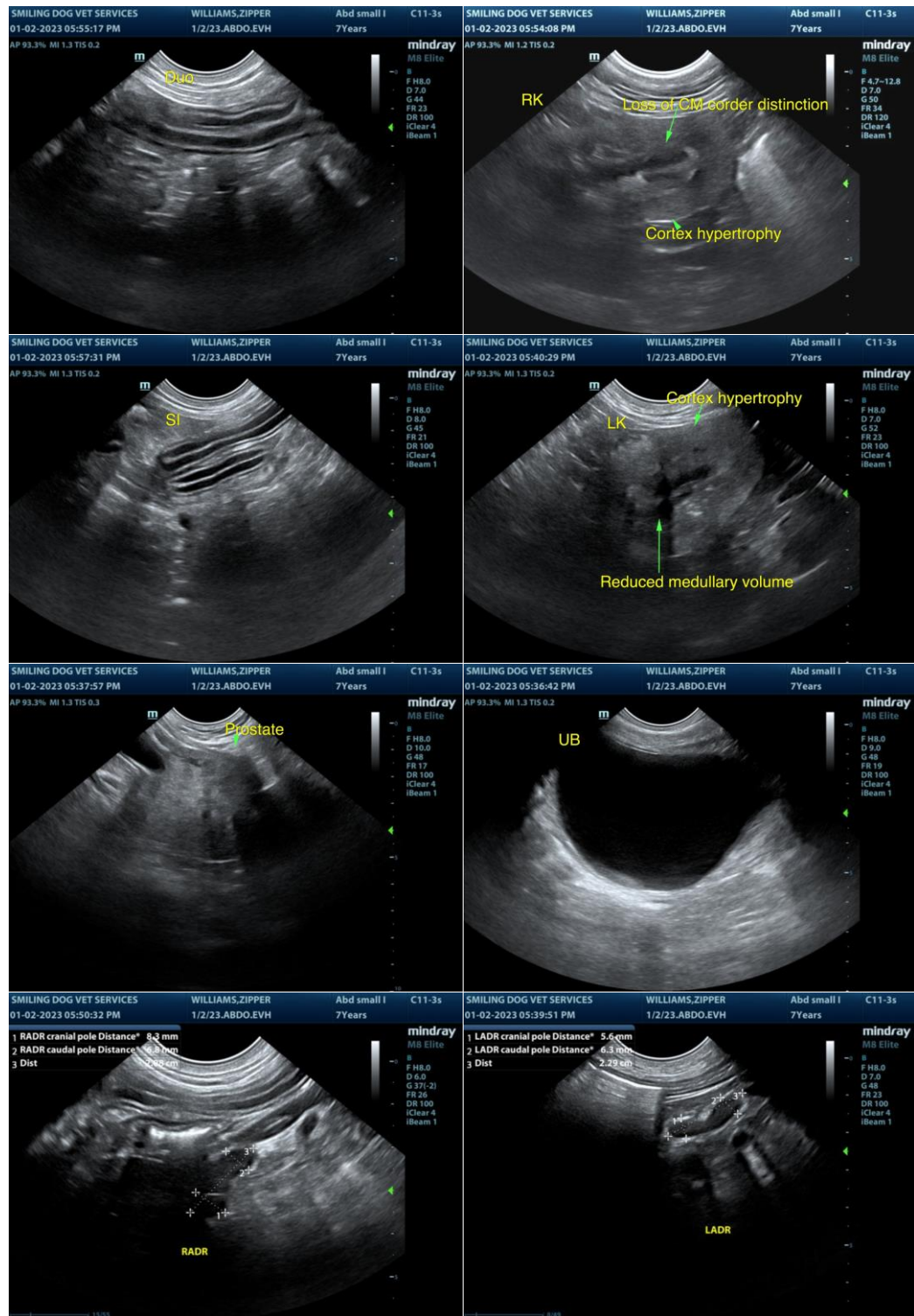
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I



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can be of any further assistance, please contact me.

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