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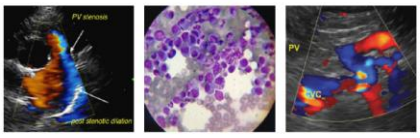

SonoPath
Clinical Sonography & Telecytology
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PATIENT

Charlie Stanley

SPECIES

Canine

BREED

Mixed

SEX

MN

AGE

8 years

WEIGHT

80 pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Runnells RVT

HOSPITAL NAME

SVS Imaging Kansas City

REFERRING VET

Dr. John Lyle

INVOICE

10709ag

DATE

06/01/2022

PRESENTING CLINICAL SIGNS

History: Continual bladder issues, since 4/13/22. Walking and urinating/dribbling, going more frequently. First treated with Amoxi and Methioform. Continued Methioform with maybe slight improvement, but still urinating/dribbling urine in home. Also has recently had TPLO sx.

Abnormal PE/Chem/CBC/UA Results: UA 4/13/22: SP GRAV 1.008, pH 8, no blood, nsf in sediment. UA 4/28/22: SP GRAC 1.010, pH 6, 3+ blood on strip, sediment has sludge and amorphous material. UA 5/13/22: SP GRAV 1.013, pH 8, no blood and nsf in sediment. Microaluminuria 5.2 (<2.5).

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder exhibited normal size and tone with minimal anechoic urine present in the bladder lumen which prohibited full evaluation of the bladder walls yet generalized moderately thickened ventral, apical and dorsal bladder walls extending into the trigone and bladder neck were present. The thickened walls exhibited subtle nonhomogeneous echogenicity without evidence of mural mineralization. The ventral urinary bladder wall measured 1.0 cm in width. Concurrent prominent to thickened visible proximal urethra to a depth of 4 cm was present. No evidence of proximal urethra dilation with retained urine. Potential for mild particulate sediment with no evidence of calculi. The proximal urethra measured 1.0 cm in width

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 7.2 cm in length. The right kidney measured 7.4 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The left adrenal gland exhibited generalized enlargement with areas of capsule asymmetry and a nonhomogeneous parenchyma without evidence of mineralization. The left adrenal gland measured approximately 2.5 cm x 2.3 cm. Overt evidence of vascular invasion associated with the left adrenal gland was not definitively present yet cannot be excluded. The right adrenal gland exhibited overall normal capsule symmetry with borderline prominent size and heterogeneous parenchyma. The right adrenal gland measured 2.8 cm length by 1.1 cm cranial pole width by 0.87 cm width at the caudal pole.

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. A solitary non disruptive hypoechoic nodule was present in the caudal spleen measuring 0.67 cm in diameter. 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.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to

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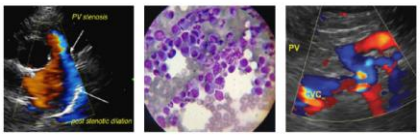

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benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

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.

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

Pancreas

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.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Diffusely thickened urinary bladder and visible proximal urethra
- Irregular to enlarged left adrenal gland
- Mild nonhomogeneous right adrenal gland exhibiting borderline prominent size
- Minor hepatic parenchyma remodeling
- Solitary nondisruptive caudal splenic nodule

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Th splenic nodule is nonspecific with considerations including focal area of lymphoid hyperplasia, hematopoiesis, small hematoma or similar. Neoplastic criteria thought less likely however sonographic monitoring of the spleen for evidence of progression is warranted.

The thickened urinary bladder and proximal urethra may indicate acute vs chronic cystitis and urethritis. The possibility of infiltrative urinary bladder and urethra pathology i.e. extensive bladder or urethra tumor or other pathology cannot be definitively excluded. Screening BRAF assay as well as urine C/S on sterile urine sample is suggested. Given no overt evidence of urethral obstruction and if clinical concern for urethral hyperreflexia a prazosin trial could be considered. Sonographic monitoring of the bladder and urethra and medical therapy for cystitis would be reasonable. A urinary bladder wall biopsy for histopathology is likely required for definitive diagnosis.

Benign adrenal hyperplasia or adenomatous change with potential for emerging neoplastic criterial specifically in the left adrenal gland is possible. Screening BP is recommended to assess for evidence of hypertension which may allude to pheochromocytoma. A full adrenal workup is suggested if clinical signs consistent with Cushing's disease are present, however the appearance of the liver was not overtly consistent with steroid hepatopathy. Sonographic monitoring vs ideal abdominal CT for further assessment and evidence of progression is recommended.

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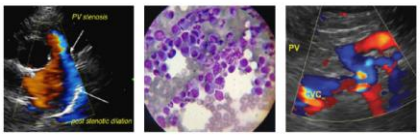

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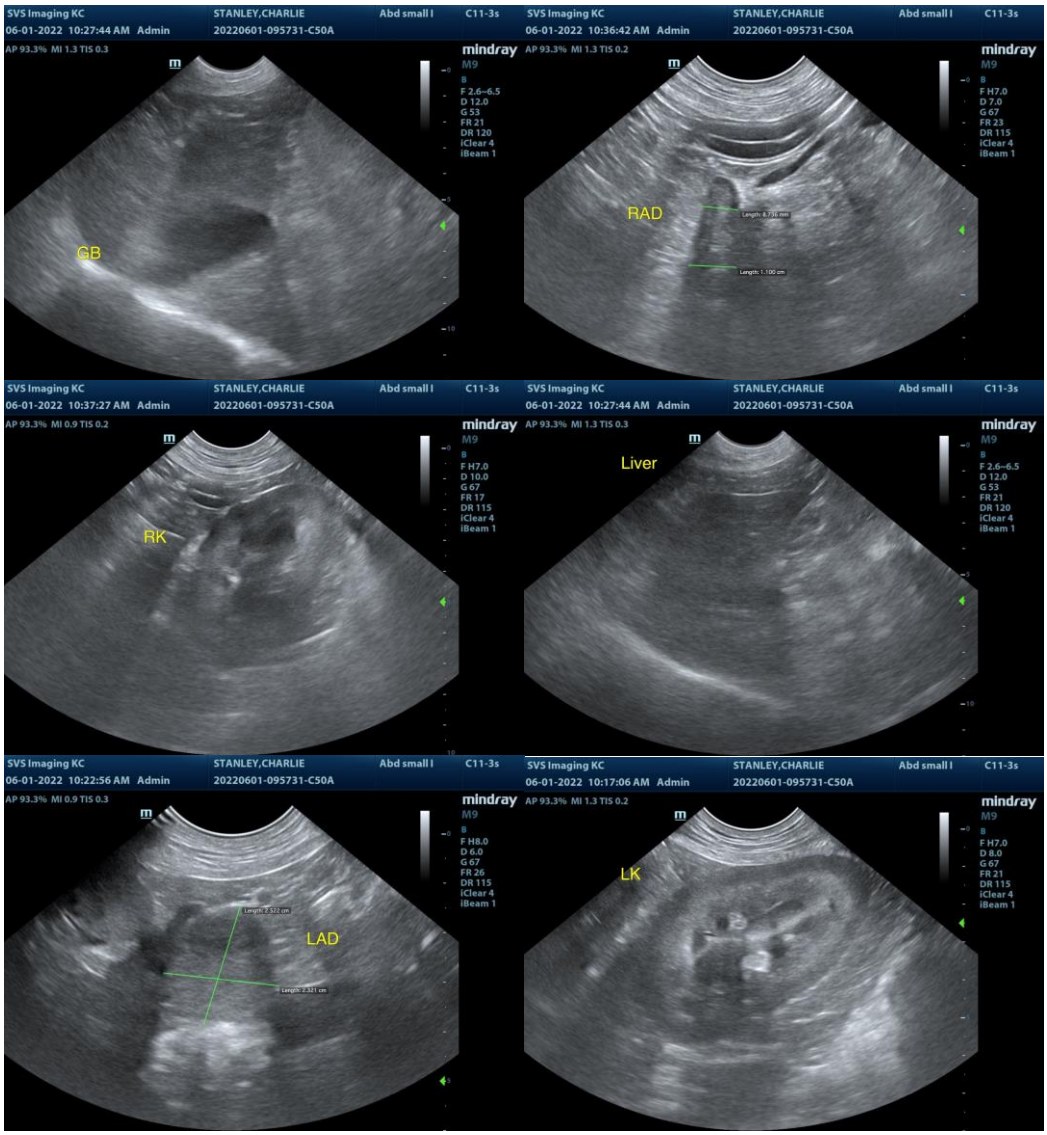

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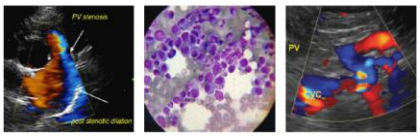

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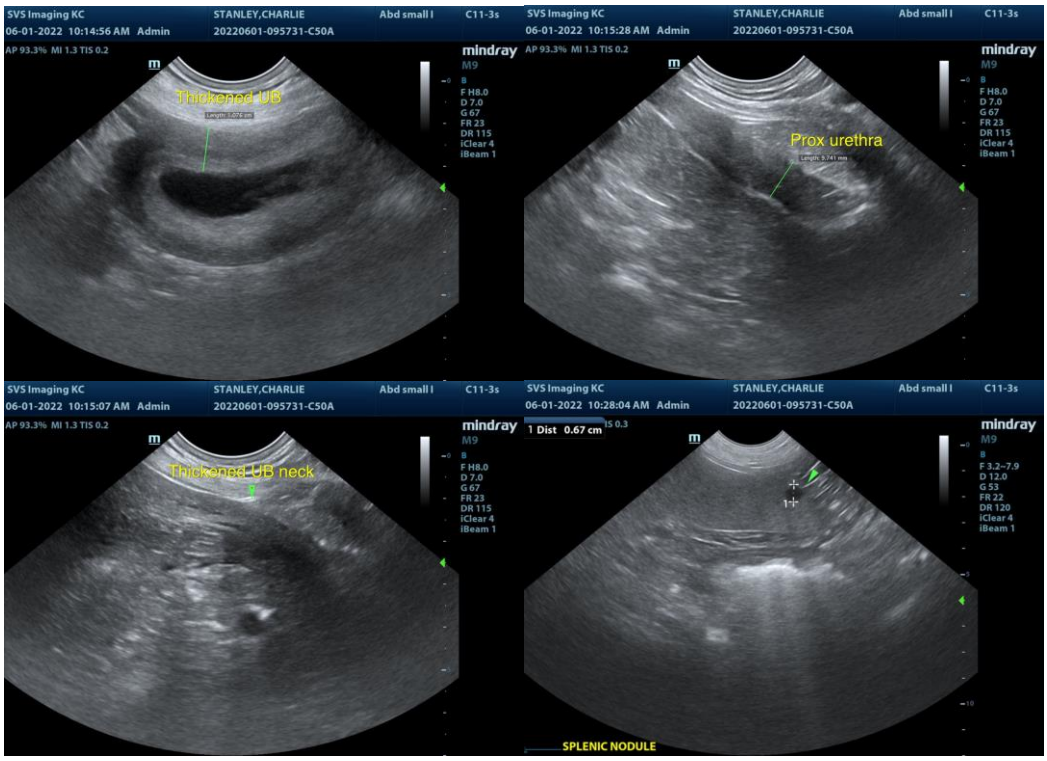

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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