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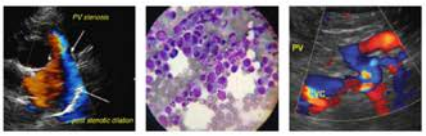
fredgromalak@gmail.com



SonoPath
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PATIENT

Oscar Green

SPECIES

Canine

BREED

Shih Tzu

SEX

Neutered Male

AGE

14 Years

WEIGHT

11.6 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Mukwonago AH – Dr. Bogunovic

INVOICE

39109

DATE

6/29/22

PRESENTING CLINICAL SIGNS

Presented on 6/27/22 for having a hard time standing up, owner having to carry around. Abnormal PE/Chem/CBC/UA Results: Cardio- Grade 3/6 LAS murmur MS: Mild generalized muscle wasting Int: Multiple soft SC masses DDX: CBC elevated- WBC (21.33), Neu (16.2), Mono (1.31), Baso (0.14), decreased HCT (31.4), PLT (39k) clumping noted CHEM- BUN elevated (43) Saline Autoagglutination - negative Blood Smear - NSF DX: non-regenerative anemia, R/O chronic disease, neoplasia, upper GI bleed, IMHA/Evans, open elevated BUN normal creat; suspect upper GI bleed

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with mild to moderate dependent mineral. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

Concurrent mineral noted in the residual prostatic urethral lumen. The residual prostate was overtly normal in size and appearance, measuring 0.80 cm in diameter.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Areas of non-obstructive medullary mineral to small renoliths present. The left kidney measured 4.0 cm. The right kidney measured 4.1 cm. Cortical cyst noted in the right kidney measuring 1.1 cm diameter.

Adrenal Glands

Both adrenal glands were enlarged in size, given the patient size and breed. Minor capsule asymmetry noted with non-homogeneous to indistinctly nodular adrenal parenchyma. A pinpoint area of mineralization noted in the right adrenal gland. No overt evidence of vascular invasion or parenchymal capsule escape. An indistinct, non-homogeneous nodule was noted in the left adrenal gland, measuring 1.8 cm x 1.1 cm. Overall left adrenal gland measured 2.5 cm length x 1.26 cm at the cranial pole and 0.95 cm at the caudal pole. The right adrenal gland measured 2.7 cm length x 1.2 cm at the cranial pole and 1.4 cm 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. 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 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 mild, echogenic, nonmineralized biliary sludge. The cystic duct and common bile ducts were normal without evidence of dilation.

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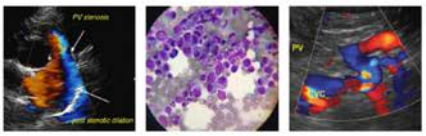

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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. Mild non-shadowing gastric ingesta/chyme and luminal gas present.

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 semiformed 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

Several mildly prominent to enlarged medial iliac lymph nodes were present. Example measured 1.4 cm x 0.66 cm. The lymph node was essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). Concurrent intermittent similar appearing mesenteric lymph nodes also possible. Both the mesenteric and medial iliac lymph nodes were not overtly consistent with inflammatory or neoplastic criteria, and likely incidental.

ULTRASONOGRAPHIC FINDINGS

- Non-obstructive cystic and residual prostatic urethral mineral/small calculi
- Bilateral chronic renal changes with non-obstructive medullary mineral/small renoliths
- Mild gallbladder debris – incidental, given alck of reported cholestasis.
- Overtly normal gastrointestinal tract with mild gastric chyme
- Bilateral mildly enlarged to irregular/indiscintly nodular adrenal glands

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Both the left and right adrenal glands were abnormal, yet non-specific, with considerations including adenomatous change, benign hyperplasia, adrenal lipogranulomas, while the possibility of left or right or possible bilateral neoplastic criteria cannot be excluded. Screening blood pressure recommended to assess for evidence of hypertension, which may allude to a pheochromocytoma. Adrenal hyperfunction is considered unlikely, given lack of reported clinical signs and sonographic appearance of the liver.

Sonographic monitoring of the bilateral adrenal glands for evidence of progression is recommended. Urine culture and sensitivity recommended to rule out urinary tract infection. This patient is suspected to be passing small amounts of mineral from the kidneys into the urinary bladder. Overt evidence of structural gastrointestinal pathology (i.e., masses, definitive evidence of ulceration, etc.) was not overtly evident. Gastroprotectant protocol could be considered if clinically indicated. CBC pathology review could be considered.

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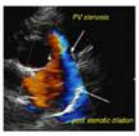
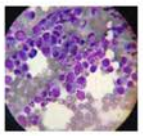
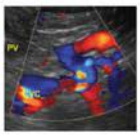

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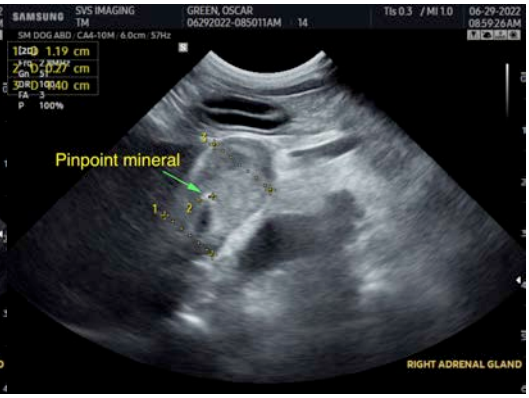

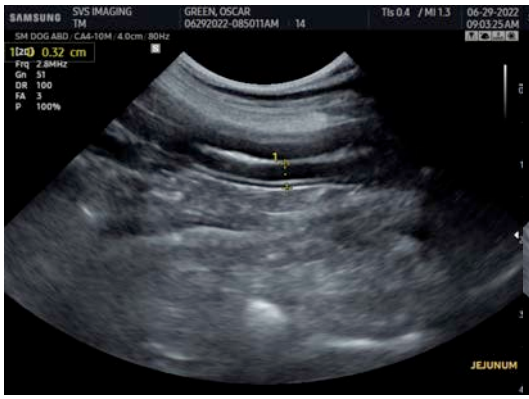

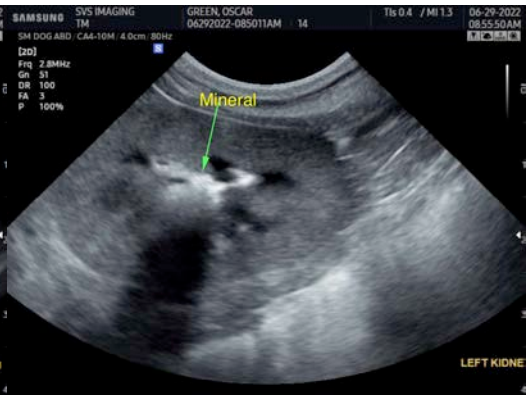

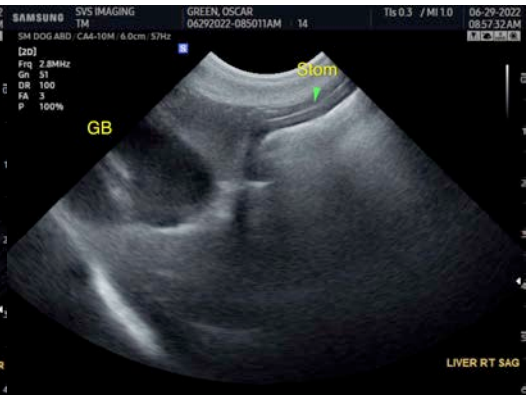

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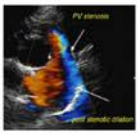
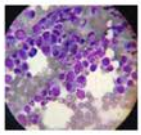
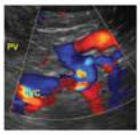

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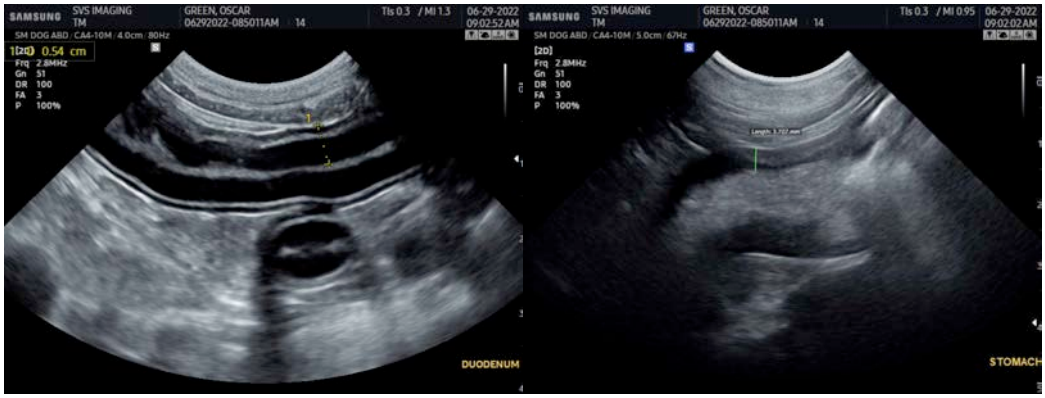

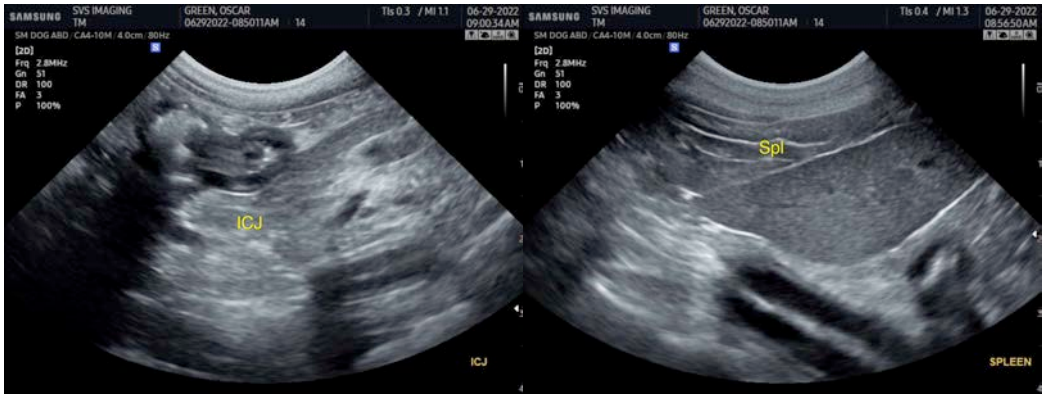

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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