



PATIENT PRESENTING CLINICAL SIGNS

Max Mitchener

Max appears normal to owner and PE unremarkable. PSB for removal of deciduous teeth revealed ALT 827(10-125) and remainder of BW normal other than mild hypochloremia. Subsequent U/A have showed significant urinary tract inflammation with some oxalate and struvite crystals, pH 7.0, SP. grav - 1.047, trace protein but no bacteria, squamous and non-squamous epith cells. Treated empirically with 2 wks of ABs recheck U/A showed improvement of inflammatory cells and no more crystals or protein. But this time similar cells and also rods and cocci. Continued with ABs for 2 more weeks and recheck urine showed significant inflammation, no bacteria, some struvite, trace protein. Urine culture after 7 days off ABs was negative. No meds currently.

SPECIES

Canine

BREED

Shih Tzu

Abnormal PE/Chem/CBC/UA Results: Recheck ALT 6/21/23 showed ALT greater than 1000 and AST 197(0-50). No uroliths seen on rads.

SEX

MI

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

AGE

2yr

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra 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.

WEIGHT

3.9kg

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 3.5 cm in length. The right kidney measured 3.6 cm in length.

INTERPRETED BY

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

The area of the aortic trifurcation was free of pathology.

IMAGING PERFORMED BY

Crystal Hill

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 mildly echogenic to heteroechoic without parenchymal mineralization. The prostate measured 1.9 cm in diameter. The bilateral testicles were sonographically unremarkable.

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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 0.31 cm width at the caudal pole and 1.4 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.35 cm width at the caudal pole and 1.2 cm length.

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Robinson

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.

INVOICE

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Liver/Gallbladder

DATE

06/23/2023

The liver was subjectively normal to possibly subnormal in size. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. Subjectively normal to adequate vascular volume. The hepatic and portal vasculature were normal in appearance without signs of congestion.



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

Gastrointestinal

SPECIES

Canine

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.

BREED

Shih Tzu

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

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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.

AGE

2yr

Free Abdomen

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

ULTRASONOGRAPHIC FINDINGS

WEIGHT

3.9kg

- Normal urinary bladder.
- Mild benign prostatic hyperplasia-expected presentation for a young intact male.
- Normal kidneys.
- Hepatopathy-inflammatory hepatopathy, potential microvascular dysplasia/portal hypoplasia.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of intrahepatic or extrahepatic macroscopic shunt was visualized yet technically cannot be definitively excluded. Correlation with bile acid testing is recommended. Assuming normal clotting status and using a 25g needle, a hepatic FNA for screening cytology could be considered for further assessment. A hepatic core surgical biopsy is required for further definition as to whether primary parenchymal disease or microvascular dysplasia/portal hypoplasia is present. If concern for non-visualized shunt, gold standard CT with contrast would be ideal.

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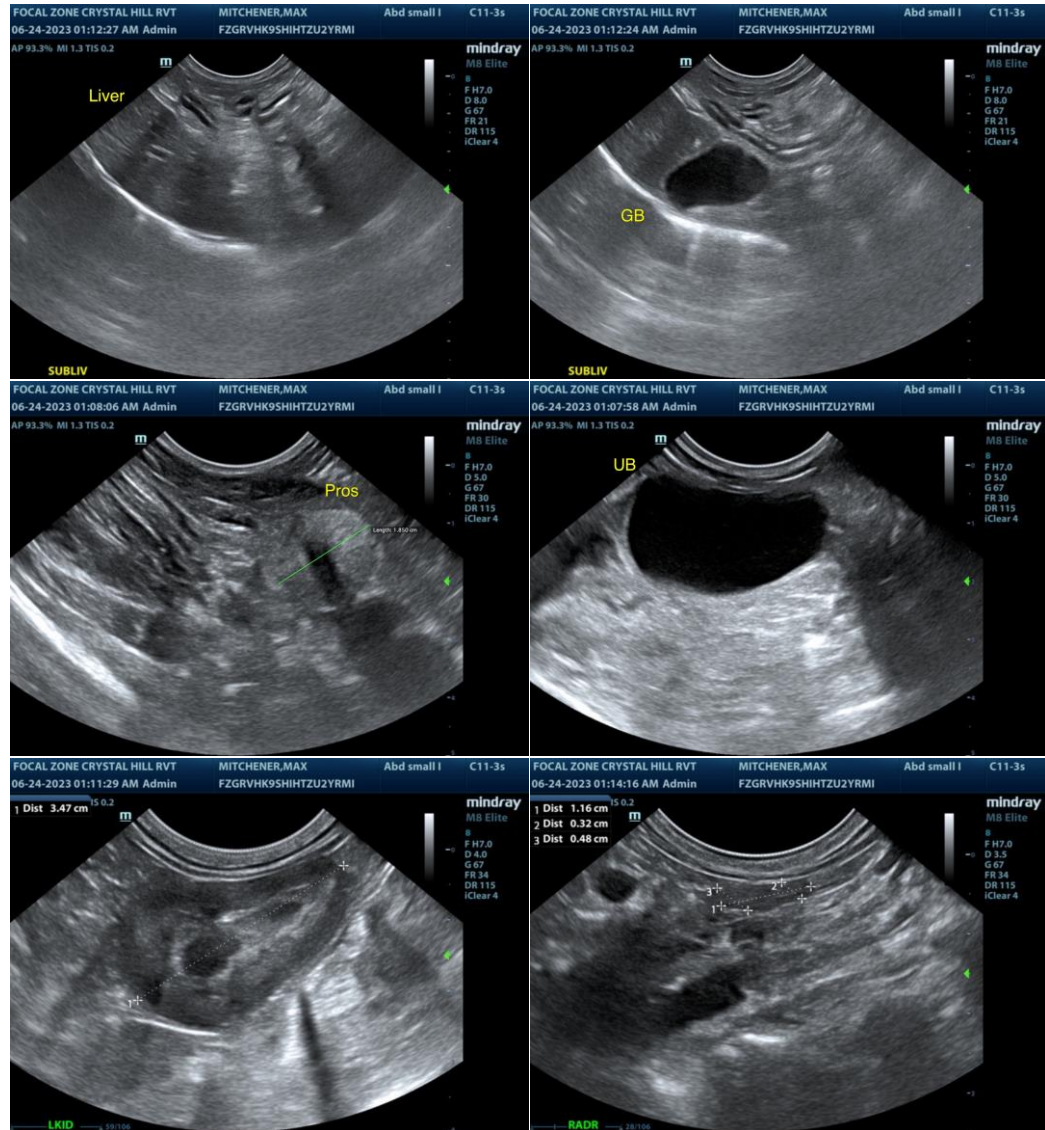
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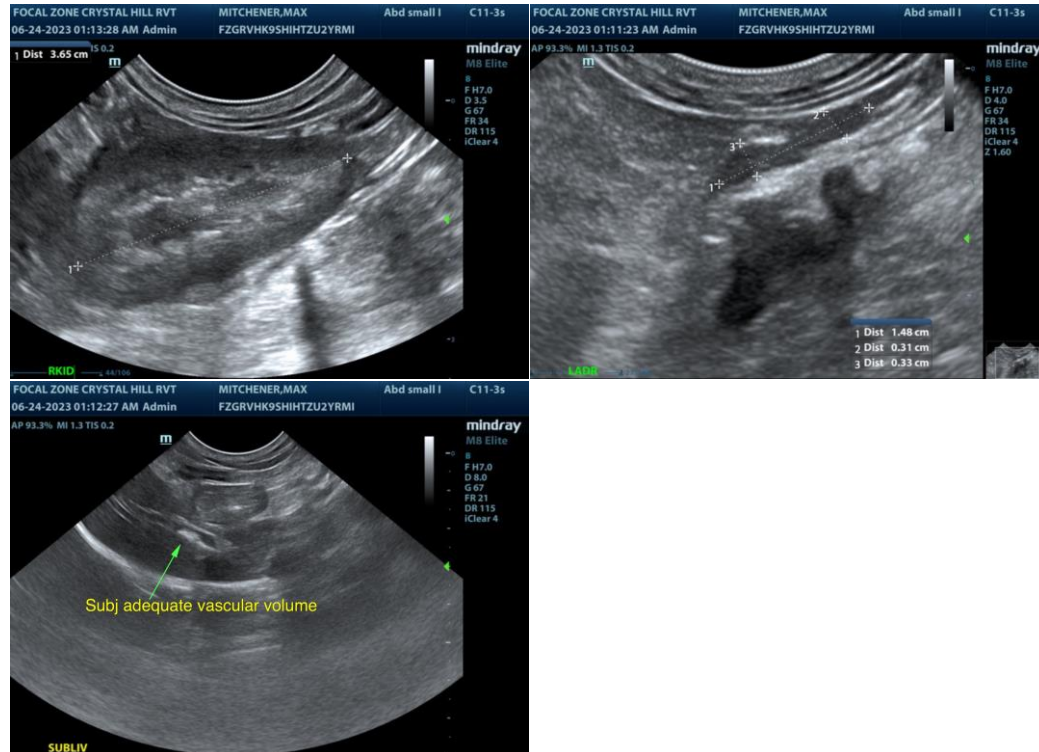
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AGE

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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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