SonoPath
Clinical Sonography & Telecytology
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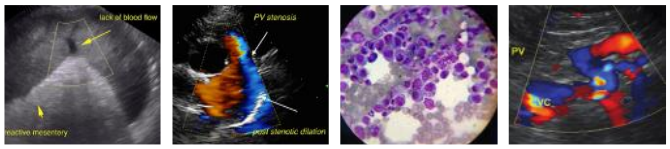

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Rusty Gutierrez

SPECIES

Canine

BREED

Chihuahua

SEX

MN

AGE

12

WEIGHT

7.2kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Belan

HOSPITAL NAME

Sunridge Vet Clinic

REFERRING VET

Dr. Hagen

INVOICE

14224ag

DATE

06/26/2023

PRESENTING CLINICAL SIGNS

Has had an episode of vomiting and lethargy. Mostly non clinical. Scan due to chronic elevation of liver enzymes.

Abnormal PE/Chem/CBC/UA Results: Chronic moderate to severe elevation of liver enzymes

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Mild asymmetrical luminal surface to micropolyploid changes were present likely associated with age related mural changes. 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.

Normal size and margination were 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 mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Bilateral focal areas of medullary mineral were present. The left kidney measured 4.3 cm in length. The right kidney measured 4.1 cm in length.

The area of the aortic trifurcation was free of pathology.

The area of the residual prostate appeared normal and free of pathology.

Adrenal Glands

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.55 cm width in the cranial pole and 0.51 cm width in the caudal pole. The right adrenal gland measured 0.49 cm width in the cranial pole and 0.49 cm width in the caudal pole.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease.

Liver/Gallbladder

The liver presented mildly enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. Increased yet indistinct portal vascular borders were present. Normal vascular volume.

The gallbladder was non-distended in size with mildly thickened to hyperechoic wall. The dorsal gallbladder wall measured 0.23 cm in width. Anechoic luminal content with moderate non-dependent mildly congealed variably hyperechoic adhered lumen sediment and mucus was present. Subtle increased pericholecystic tissue echogenicity was noted. The cystic and common bile ducts were normal.

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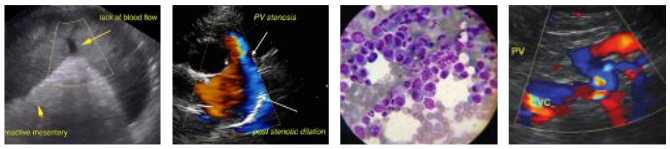

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Gastrointestinal

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 pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

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

ULTRASONOGRAPHIC FINDINGS

- Micropolyploid urinary bladder, possible low grade cystitis.
- Mild chronic renal changes with focal medullary mineral.
- Chronic hepatopathy exhibiting mild non-uniform parenchyma-subjectively benign.
- Chronic cholecystitis with moderate inspissated gallbladder sludge, possible emerging mucocele.
- Pancreatic remodeling.
- Mildly heterogenous/nodular adrenal glands-probable age related/adenomatous adrenal changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. Assuming normal clotting status and using a 25g needle, a hepatic FNA for screening cytology could be considered for further assessment. Bile C/S is likely ideal for this patient.

Assessment for evidence of cranial abdominal/subxiphoid discomfort on palpation (not associated with the gallbladder) +/- abnormal spec cPL which may allude to low grade pancreatitis is recommended.

As needed GI support with some or all of the following protocol may be considered.

Enrofloxacin 5 mg/kg SID PO & Metronidazole (7.5 mg/kg po bid) over 3 weeks, Ursodiol (10-15 mg/kg p.o. q24h) over 8 weeks and recheck sonogram. Monitor rapid rise in ALT, SAP, Bilirubin, bilirubinuria, leukocytosis, focal cranial abdominal subxiphoid discomfort or progressive anorexia.

More information regarding clinical emerging mucocele issues may be found with our article and research at http://sonopath.com/resources/articles, Defining a GB Mucocele and Clinical Parameters in Dogs with Sonographically Diagnosed Surgical Biliary Disease from ECVIM 2009.

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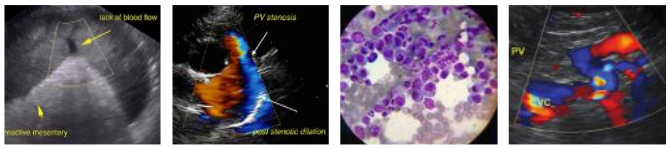

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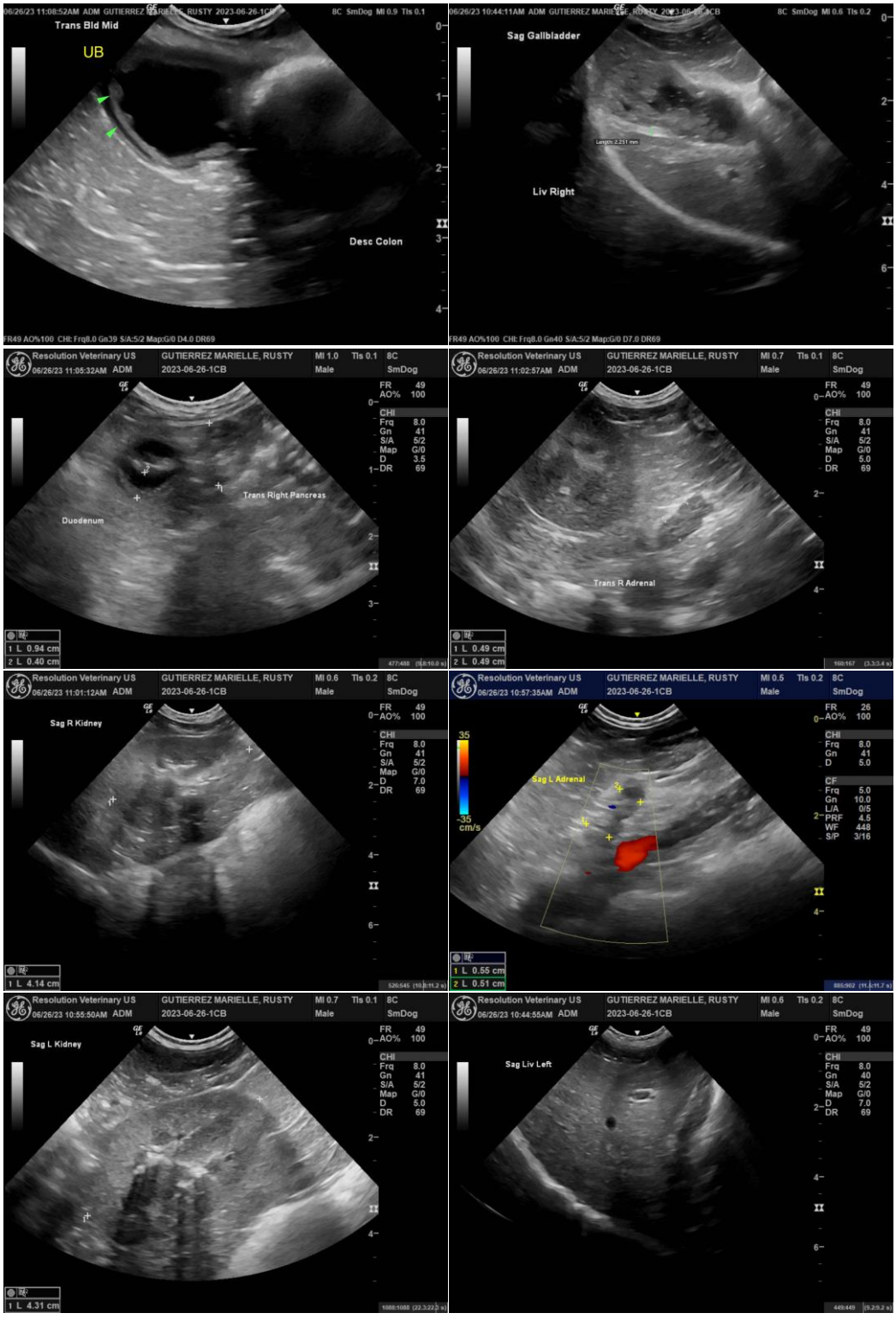

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not

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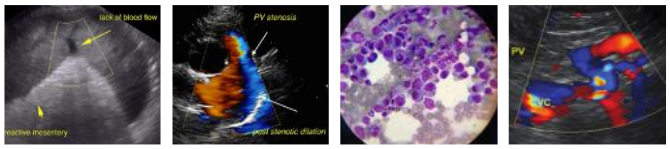

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visible in the image/video clips provided.

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)
info@sonopath.com