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Clinical Sonography & Telecytology
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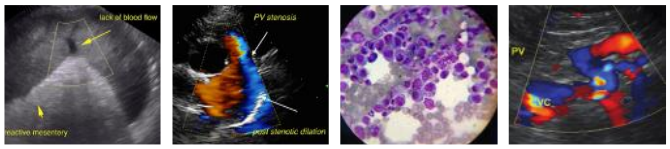

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1-800-838-4268 info@sonopath.com

PATIENT

Chase Chiappane

SPECIES

Canine

BREED

Mini Pinscher

SEX

M

AGE

13yr

WEIGHT

16.2lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr.Paul Kim

HOSPITAL NAME

Ridgefield Park Animal Hospital

REFERRING VET

Dr.Paul Kim

INVOICE

13767ag

DATE

05/09/2023

PRESENTING CLINICAL SIGNS

Patient came to the hospital today after privious vet recommned abdominal ultrasound due to abnormalitites on the blood chemistry.

Abnormal PE/Chem/CBC/UA Results: Bloodwork was done 4/24/2023 AST: 70 IU/L ALT: 518 IU/L Alk Phosphatase: 187 IU/L BUN/Creatinine Ratio: 34 Potassium: 5.6 mEq/L NA/K RATIO: 26 Triglycerides: 682 mg/dL PrecisionPSL: 331 u/L

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ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder presented mildly thickened urinary bladder wall isoechoic to the adjacent normal urinary bladder wall. The luminal margin of the thickened urinary bladder wall was mildly asymmetrical in contour. Urinary bladder wall thickness measured 0.56 cm. Mineralization or echogenic foci within the thickened areas of urinary bladder wall was not present. The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal 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. The urinary bladder was subnormal in size owing to lack of urine distension which prohibited full evaluation of the urinary bladder walls. No urinary bladder tumors or calculi.

Possible subnormal left kidney size compared to the right kidney with bilateral symmetrical margination was present. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Bilateral intermittent cortical cysts and minor medullary mineral was present. The right kidney measured 4.3 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 exhibited mild prominent size based on caudal pole width and body weight. 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 0.83 cm width in the caudal pole. The right adrenal gland measured 0.73 cm width in the cranial pole and 0.67 cm width in the caudal pole.

Spleen

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Intermittent to multiple well-defined, symmetrical, hyperechoic nodules were present throughout the cranial to caudal 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 or neoplastic changes were not noted. The hyperechoic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

Liver/Gallbladder

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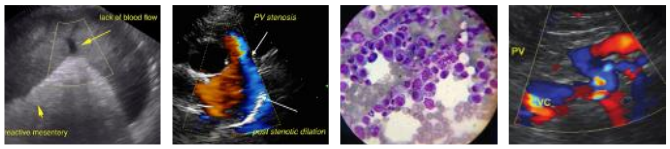

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The liver presented mild to moderately enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with 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 contained variably echogenic ingesta exhibiting progressive distal acoustic shadowing with no signs of ileus, obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Discrete segmental intestinal mucosa hyperechoic speckling was present which is non-specific yet at times may be associated with enteritis if clinically applicable. The lumen of the small intestine contained segmental non-shadowing ingesta/chyme with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent semi 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

- Possible mild cystitis pattern.
- Moderate chronic renal changes with minor medullary mineral and cortical cysts, possible subnormal left kidney size compared wo the right kidney.
- Benign splenic nodules-consistent with myelolipomas.
- Non-specific hepatopathy, sonographically unremarkable gallbladder.
- GI ingesta with non-specific mild segmental intestinal mucosal speckling.
- Mildly prominent non-homogenous adrenal glands- nonspecific.
- Mild pancreatic remodeling- patient/ age related variant, remodeling owing to previous inflammatory episode or mild pancreatitis possible.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although non-specific, considerations for the liver may include nonspecific inflammatory/immune mediated disease given the ALT/AST elevation with potential primary or concurrent vacuolar hepatic changes, cholestasis, hematopoiesis, hyperplasia, mild fibrosis or other hepatopathy. Neoplastic criteria considered less likely. Assuming normal clotting status a hepatic FNA for screening cytology could be considered for further assessment. Hepatosupportive medications such as Denamarin and Ursodiol, if tolerated may prove beneficial.

Assessment for evidence of signs consistent with chronic pancreatitis or cranial abdominal/subxiphoid discomfort on palpation which may allude to chronic pancreatitis is recommended.

Assuming no clinical signs consistent with Cushing's syndrome, adrenal component to the elevated liver enzymes is considered less likely yet an adrenal workup would be recommended if clinal signs are present or arise.

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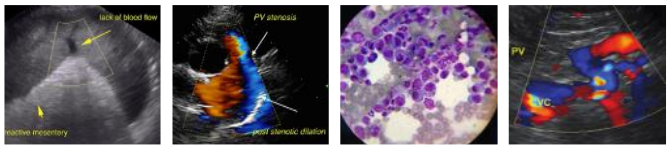

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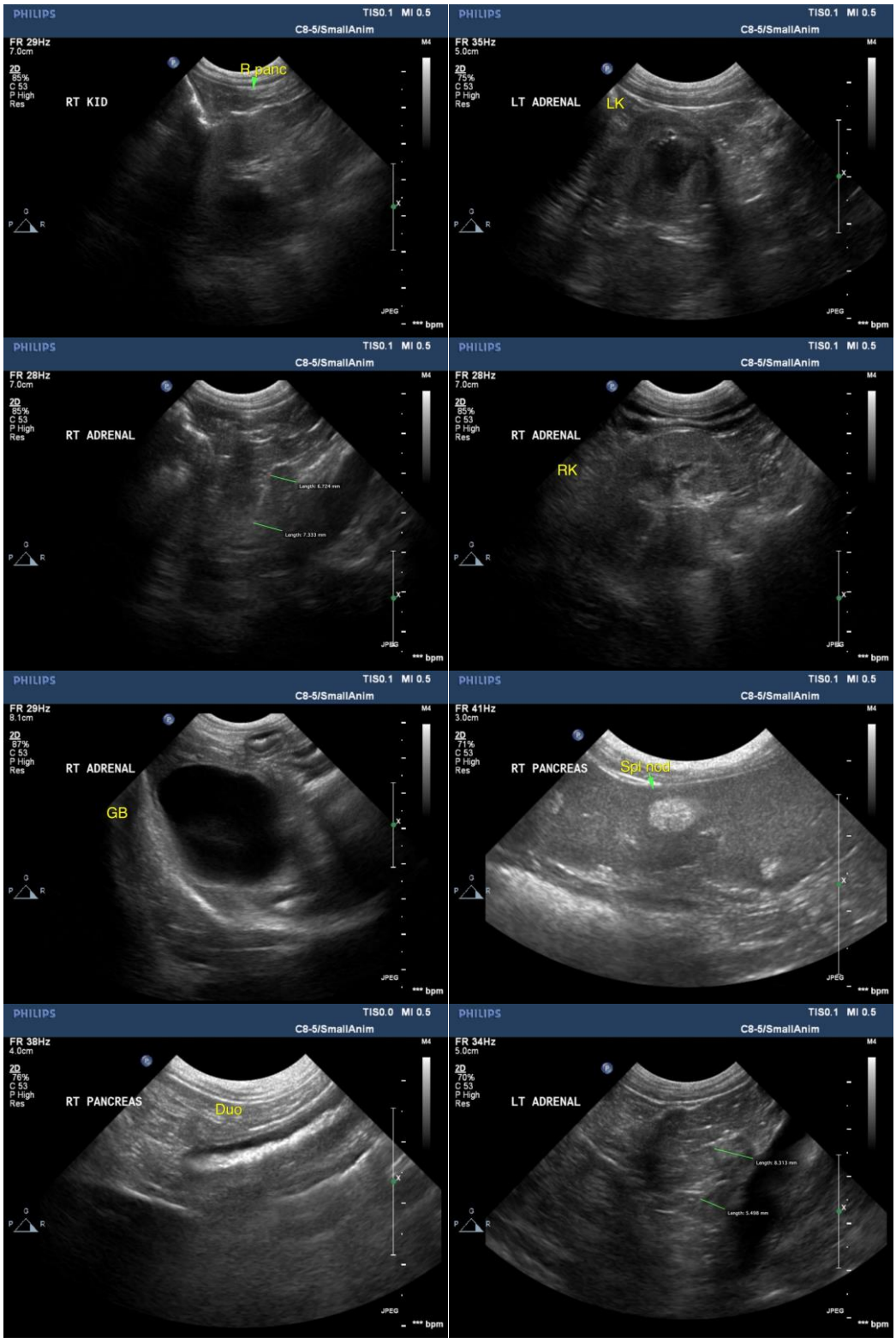

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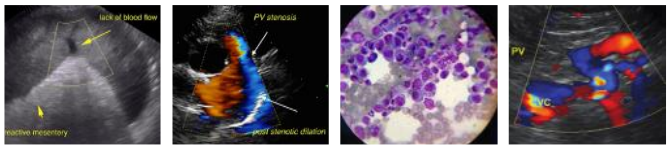

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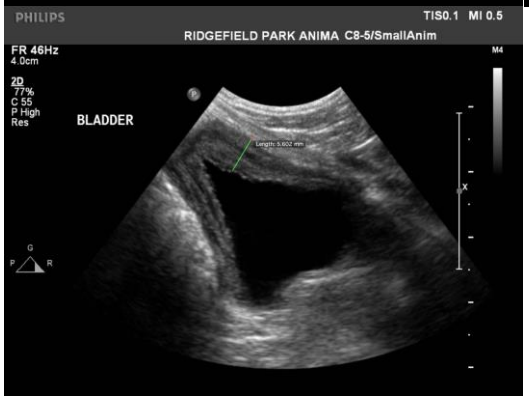

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
mac.daniel@sonopath.com