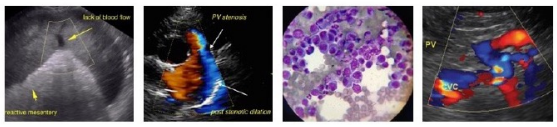


PATIENT

Rocco Furtado

SPECIES

Canine

BREED

Chihuahua

SEX

Neutered Male

AGE

13 Years

WEIGHT

5.6 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

BPH Stoney Creek

REFERRING VET

Dr. Baskin

INVOICE

36512

DATE

3/28/22

PRESENTING CLINICAL SIGNS

P was at emerg from 26th until this morning for lethargy, P is laterally recumbant with severe azotemia, low calcium, not eating and had multiple seizures over night. Had an echo last week for heart murmur and was hospitalized at our clinic for pancreatitis. Cerenia, Ampicillin, Baytril, Diazepam PRN, Sul
Abnormal PE/Chem/CBC/UA Results: This morning UREA 69.5, CREA 499, ALKP 545,

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with very minor particulate non-dependent sediment, likely indicative of minor cellular or crystalline debris. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

Normal renal size with areas of asymmetrical margination was present in both kidney. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Loss of cortical parenchyma noted, suggestive of cortical infarcts. Mild loss of corticomedullary distinction was also present. The renal medullary volume was subjectively reduced. Non-obstructive focal medullary mineralization and mild pyelectasia present in both kidneys. No evidence of retroperitoneal inflammation or effusion. The left kidney measured 4.0 cm. The right kidney measured 4.6 cm.

No overt pathology in the area of the residual prostate.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.8 cm length x 0.58 cm at the caudal pole.

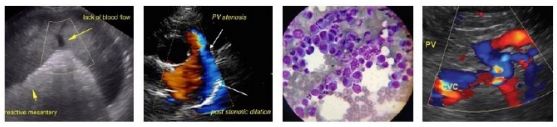
The right adrenal gland was overtly normal and without obvious pathology, subjectively measuring 1.4 cm length x 0.64 cm at the caudal pole.

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. Indistinct areas of mildly hyperechoic splenic parenchyma were present, which although non-specific, is likely suggestive of indistinct to emerging myelolipomas, previous infarct or emerging mineralization, and considered incidental. 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

The liver presented 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 moderate non-dependent to mildly organized yet subjectively mobile



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gallbladder debris. Gallbladder walls were overtly normal without evidence of inflammation. Likewise, no evidence of overt peripheral gallbladder inflammation.

Gastrointestinal

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. The stomach was primarily empty with minor retained fluid. Gastric body wall measured 0.55 cm.

The intestinal walls demonstrated intact wall layering and maintained 1:3 muscularis / mucosa ratio. The mucosa exhibited mild decreased echogenicity with occasional mucosal speckling. A segmental to diffuse ileus pattern consisting of mild fluid accumulation in the intestinal lumen was present without obstruction or foreign material. Mild segmental non-specific duodenojejunal mucosal speckling present. Duodenum wall measured 0.50 cm.

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

Pancreas

The pancreas was mildly prominent in size with areas of capsule asymmetry. Mildly hypoechoic to non-homogeneous pancreatic parenchyma.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

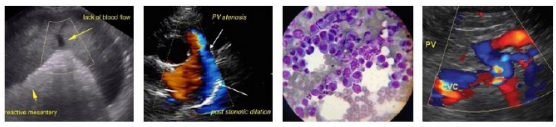
ULTRASONOGRAPHIC FINDINGS

- Bilateral chronic degenerative kidneys exhibiting bilateral mild pyelectasia, cortical cysts, and likely infarcts
- Hepatopathy – suspect benign vacuolar hepatopathy and non-obstructive cholestasis given the ALP elevation.
- Moderate non-dependent yet subjectively mobile gallbladder debris – potential for early non-inflamed gallbladder mucocele.
- Mildly hypoechoic to non-homogeneous pancreas – potential for low-grade to chronic active inflammation versus age related or patient variant.
- Gastroenteritis pattern – suspect secondary to uremia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, the renal presentation is consistent with chronic degenerative kidney disease as opposed to acute kidney injury or insult. If relatively stable renal enzymes until recently, potential for acute on chronic insult could be considered. The pyelectasia in both kidneys may be owing to renal scarring, potentially owing to previous calculi passage or IV fluid therapy in this case. Further assessment may include full urinary workup including culture and sensitivity, baseline UPC, and monitoring for evidence of hypertension.

From an abdominal standpoint, hospitalization with appropriate diuresis protocol, as needed gastrointestinal support, conservative therapy for possible low-grade pancreatitis, monitoring of urine output and body weight would be reasonable. Correlation of diuresis protocol with previous echocardiogram suggested. Overall, the kidneys are sonographically consistent with Iris Stage 3-4 CKD. If persistent seizure activity, consideration for possible concurrent intracranial disease may be



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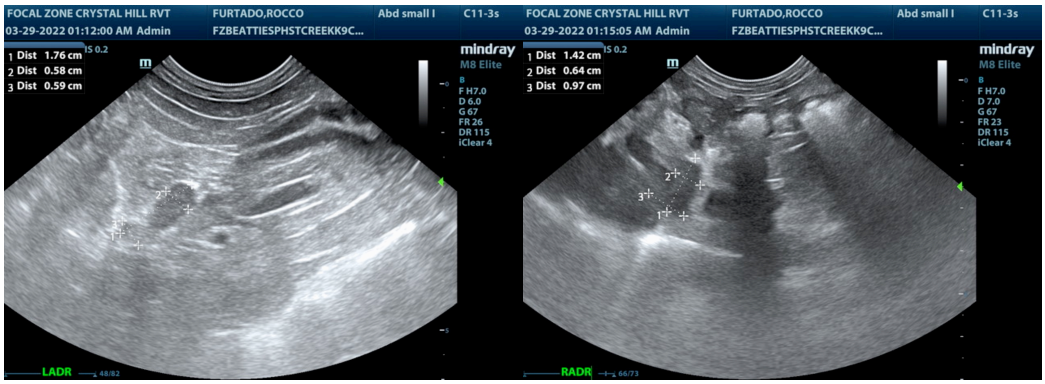

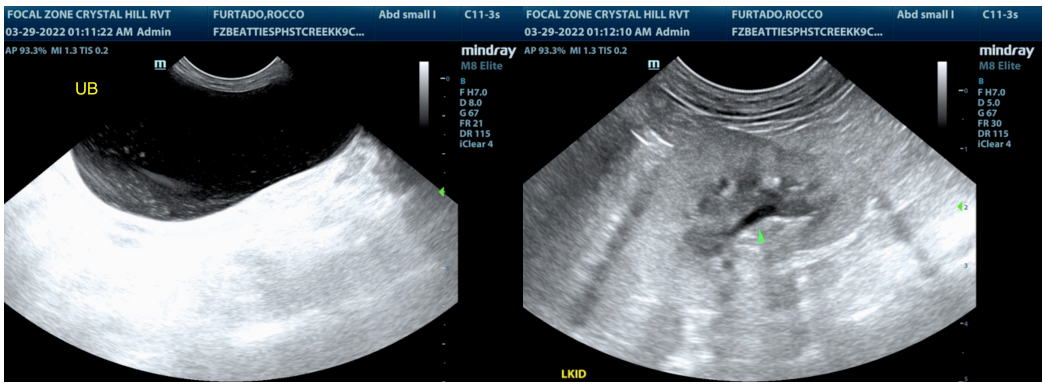

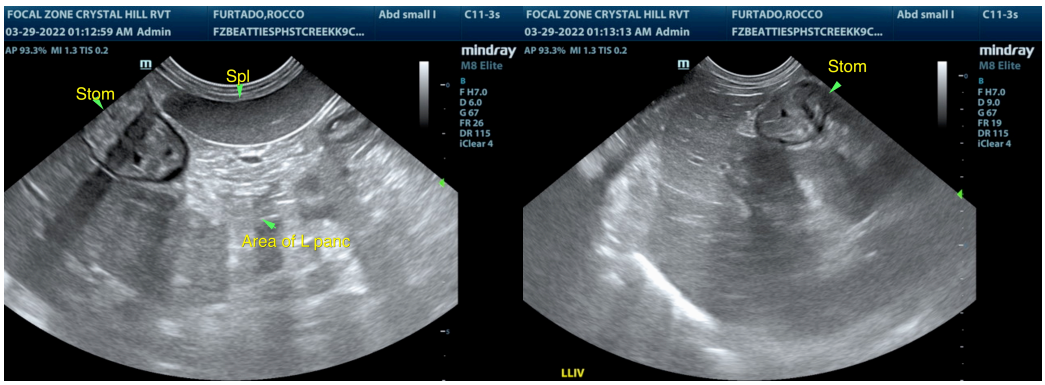

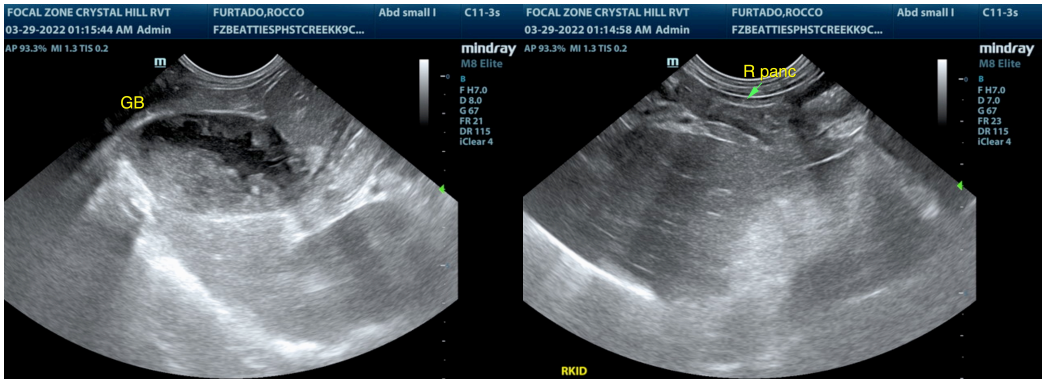

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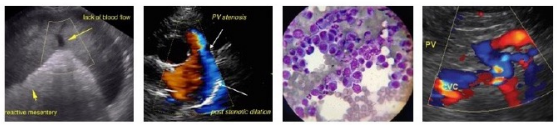

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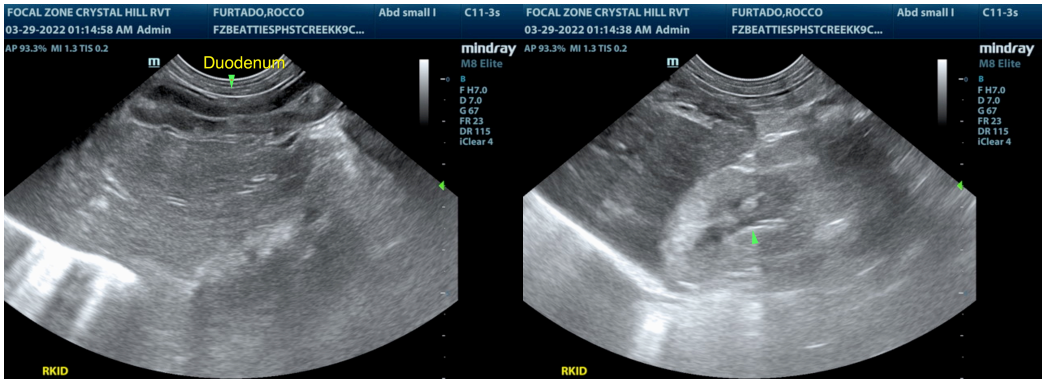

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

info@SonoPath.com