



PATIENT PRESENTING CLINICAL SIGNS

Duncan Fowler
Seen for poss flare up of pancreatitis last week, since that visit he has seemed more and more painful in the abdomen. Appetite down, vomiting 1-2x daily(bile). Had diarrhea, but resolved quickly with Metronidazole. Heart rate low and irregular, significant weight loss since last visit, Has been on Mirtaz and Metacam for OA pain, Fentanyl applied.

SPECIES

Canine
Abnormal PE/Chem/CBC/UA Results: UREA 162(elevated), Creatinine 26.5(elevated), K 5.9, rest of profile WNLs. CBC - HCT 37.6% Basophils mildly elevated, PCT slightly elevated, WBCs normal, Retics mildly low, U/A sp.grav 1.025, protein 100mg/ml, pH 5.0.

BREED

Schnauzer

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

SEX

MN

The urinary bladder was subnormal in size owing to lack of urine distension which prohibited full evaluation of the urinary bladder walls. The trigone, cystourethral junction, and visible pelvic urethra to a depth of 4 cm 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.

AGE

14yr

Mildly subnormal size and normal margination were present in the right kidney. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortex was 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. Focal areas of non-obstructive medullary mineral were present. The right kidney measured 4.3 cm in length.

WEIGHT

7.5kg

Normal renal size with asymmetrical margination was present in the left 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. Mild loss of corticomedullary distinction was also present. Pinpoint hyperechoic cortical foci were present which may indicate areas of microinfarctions, fibrosis or mineralization along with intermittent cortical cysts. The renal medullary volume was subjectively reduced. Mild left kidney pyelectasia was present. The left kidney measured 5.4 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 residual prostate exhibited subtle prominent size with symmetrical capsule contour and subtle non-homogenous non-mineralized parenchyma measuring 1.2 cm in diameter.

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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 0.50 cm width at the caudal pole and 1.5 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.50 cm width at the caudal pole and 1.4 cm length.

REFERRING VET

Dr. Hornak

Spleen

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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.

DATE

02/17/2023

Liver/Gallbladder



PATIENT

Duncan Fowler

The liver presented with borderline to mild enlargement. 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.

SPECIES

Canine

The gallbladder was non-distended in size with primarily anechoic luminal content and moderate non-organized mildly hyperechoic debris. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.

BREED

Schnauzer

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild to moderate variably echogenic non-shadowing ingesta and luminal gas with no signs of ileus, obstruction or foreign material.

SEX

MN

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.

AGE

14yr

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.

WEIGHT

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Free Abdomen

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

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ULTRASONOGRAPHIC FINDINGS

- Moderate chronic renal changes with mild left kidney pyelectasia and non-obstructive right kidney medullary mineral
- Heterogenous pancreas
- Variably echogenic gastric ingesta, overtly normal small bowel
- Subjective borderline to mild hepatomegaly-benign
- Gallbladder debris-not consistent with mucocele criteria

IMAGING PERFORMED BY

Crystal Hill

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The left kidney pyelectasia may be owing to chronic renal changes, potential pelvic scarring possibly owing to previous calculi passage or IV fluid therapy (if applicable). Urine C/S and protein: creatinine ratio on sterile urine sample is recommended. Low grade chronic left kidney pyelonephritis is considered less likely.

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The appearance of the pancreas was not sonographically consistent with significant or active pancreatitis although low grade to chronic pancreatitis is suspected. Increased spec cPL level may be associated with decreased renal function.

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The gallbladder debris and subjective mild hepatomegaly are likely incidental given lack of hepatic enzyme elevations/cholestasis. Continued monitoring for evidence of cholestasis is suggested.

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The presence of gastric ingesta is nonspecific and likely indicates post-prandial presentation. Correlation with most recent meal ingestion is recommended. If documented NPO prior to the ultrasound, the presence of gastric ingesta may indicate some degree of gastric hypomotility or



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metabolic stasis. The sonographic presentation of the ingesta was most consistent with food, without evidence of foreign material.

SPECIES

Canine

A GI panel to include PLI/TLI/Cobalamin/Folate as well as three view chest radiographs and neurological / musculoskeletal examination are recommended to assess for or rule out occult disease which may cause weight loss.

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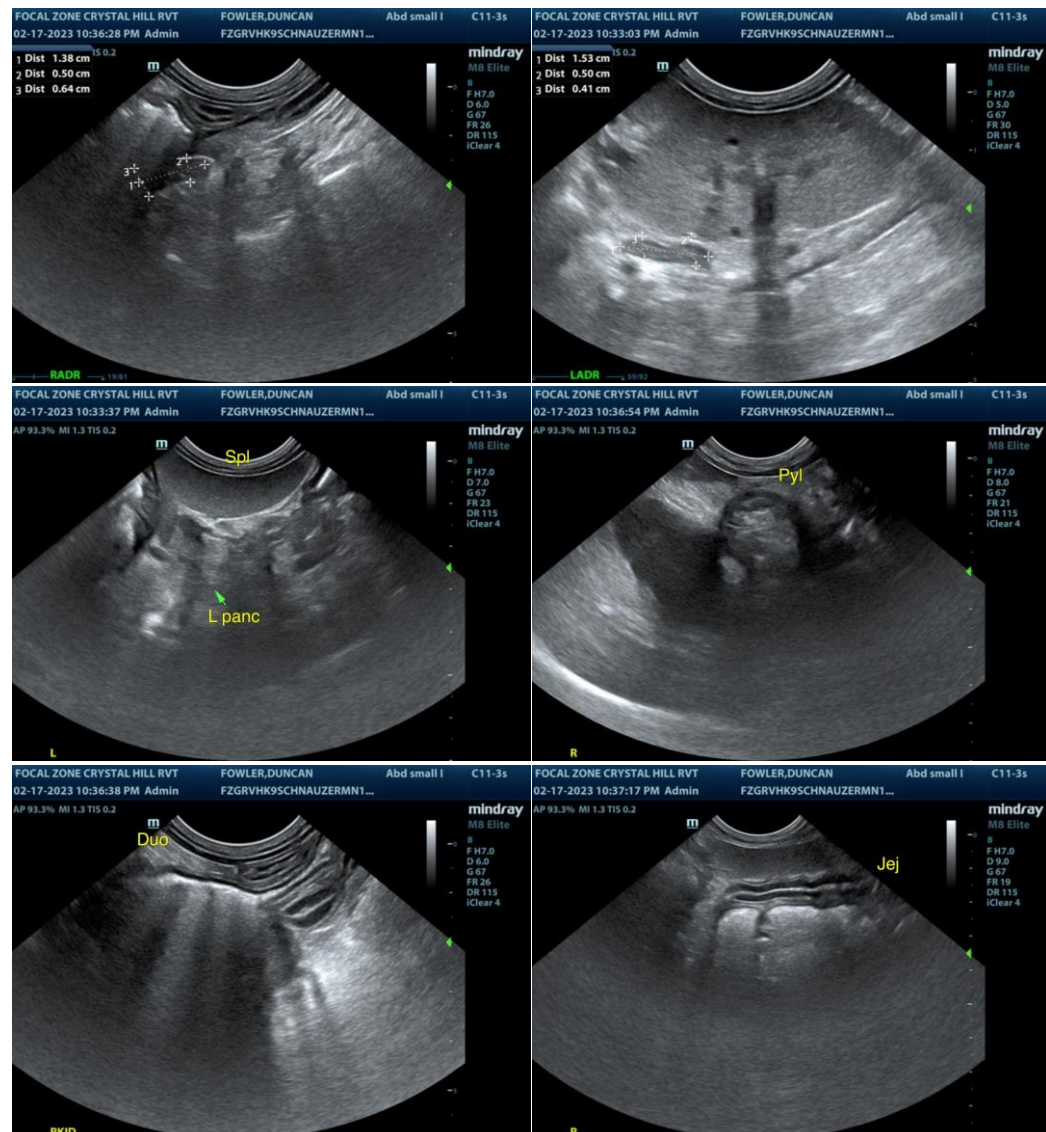
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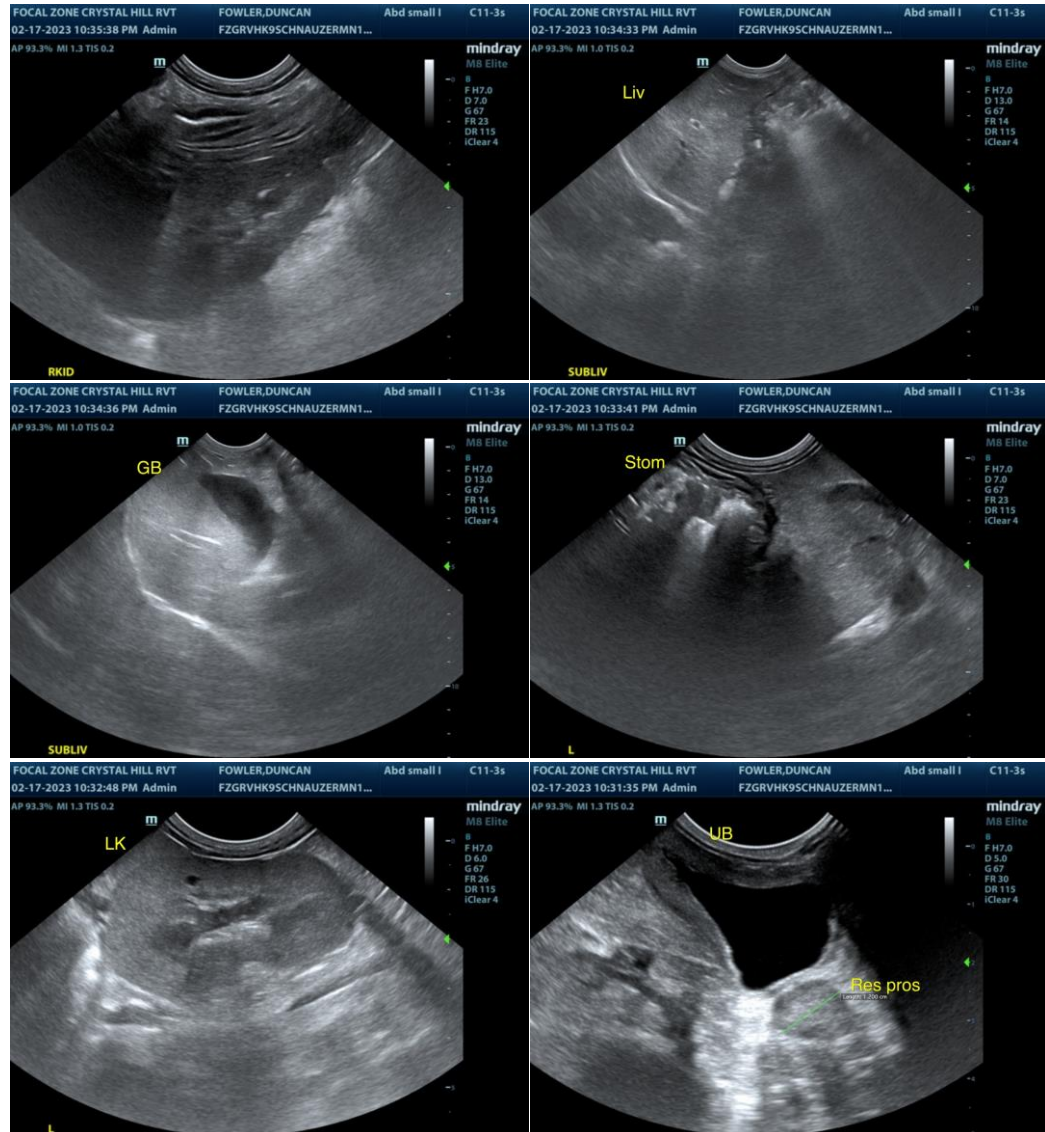
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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