



PATIENT PRESENTING CLINICAL SIGNS

PATIENT Walter Holm
SPECIES Feline
BREED Domestic shorthair

History: Indoor cat acute onset of anorexia, vomiting two day started Feb 1, 2022. Is on IVF, Antibiotics, Cerenia for ARF. Has improved a bit with treatment. Possible ARF on CRF
Abnormal PE/Chem/CBC/UA Results: In House Labwork: CBC: WNL except, WBC $17.46 \times 10^9/L$ HIGH (normal 2.87-17.02 $\times 10^9/L$) Neutrophils $15.8 \times 10^9/L$ HIGH (normal 2.3-10.29 $\times 10^9/L$) Eosinophils $0.07 \times 10^9/L$ LOW (normal 0.17-1.57 $\times 10^9/L$) Chem: WNL except, Creatinine 927 $\mu\text{mol/L}$ HIGH (normal 71-212) Urea (BUN) 44.3 mmol/L HIGH (normal 5.7-12.9) Phosphorus $>5.2 \text{mmol/L}$ HIGH (normal 1.00-2.42) Sodium 148 mmol/L LOW (normal 150-165) Chloride 108 mmol/L LOW (normal 112-129) GGT 9U/L HIGH (normal 0-4) Amylase 1790U/L HIGH (normal 500-1500) T4: 11 nmol/L (normal 10-60) SDMA: 43 $\mu\text{g/dL}$ HIGH (normal 0-14) Snap fPL: Normal Snap bNP: Abnormal Urine collection: Urine: straw/colourless, clear, USG 1.009 Dirty sample for cysto. No culture

SEX ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

SEX Male, neutered
Urinary System

AGE 10 Yrs.
 The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is mildly to moderately distended. A scant amount of suspended echogenic debris is observed within the lumen. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

WEIGHT 6.35 kg.
 The left kidney is normal size (3.74 cm in length) with an irregular shape. The cortex is variably thickened and hyperechoic and there is poor corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. A cortical infarct is suspected at the lateral aspect. Moderate pyelectasia is present (0.50 cm in the transverse plane). There is no evidence of hydroureter. Renal vasculature is normal.

INTERPRETED BY

Andrea Nicastro, DVM,
Diplomate ACVIM
(Small Animal Internal
Medicine)

The right kidney is normal size (4.03 cm in length) with an irregular shape. The cortex is variably thickened and hyperechoic to heterogeneous in appearance. Hyperechoic foci are visualized. Moderate pyelectasia is present (0.55 cm in the transverse plane). There is also evidence of caliectasis. A hypoechoic outer rim is present. There is no evidence of hydroureter. Renal vasculature is normal.

IMAGING PERFORMED BY

Dr. Brian Barnes

Adrenal Glands

The left adrenal gland is normal in size (0.30 cm cranial, 0.23 cm caudal; 1.07 cm length). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

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The right adrenal gland is normal in size (0.30 cm cranial, 0.34 cm caudal; 1.08 cm length). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

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Spleen

The spleen is normal in size (0.73 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

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Liver

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of

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congestion. No pathological hepatic lymphadenopathy observed. The gall bladder lumen is mildly distended. The wall is slightly thickened (up to 0.21 cm) and hyperechoic. A small amount of gravity-dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal.

SPECIES

Feline

Gastrointestinal

The gastric lumen is distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecal colic junction and colonic wall are normal. No obstructive disease is noted.

BREED

Domestic shorthair

Pancreas

SEX

Male, neutered

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

AGE

10 Yrs.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

WEIGHT

6.35 kg.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Bilateral degenerative renal changes with dystrophic mineralization, pyelectasia and a suspected left cortical infarct. Acute-on-chronic renal failure is suspected.
- The significance of the hypoechoic rim surrounding the right kidney is unclear. It may represent inflammatory tissue, infiltrative neoplasia (i.e., lymphoma), echogenic fluid, other.

Secondary Findings:

- The mild gallbladder wall thickening may be somewhat artifactual due to lack of full repletion. Alternatively, cholecystitis and/or benign age-related hyperplasia are possible. Correlation with clinical findings is recommended.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- A UPC (if proteinuria is present) and baseline blood pressure measurement are recommended along with continued IV fluid diuresis and supportive care. A urine culture and sensitivity is also recommended 5-7 days after the last dose of antibiotics.
- Three-view thoracic radiographs should also be considered, particularly in the face of IV fluid diuresis.
- A fine needle aspirate of the right kidney can be considered to rule out round cell neoplasia although given the normal renal size, this is considered less likely.

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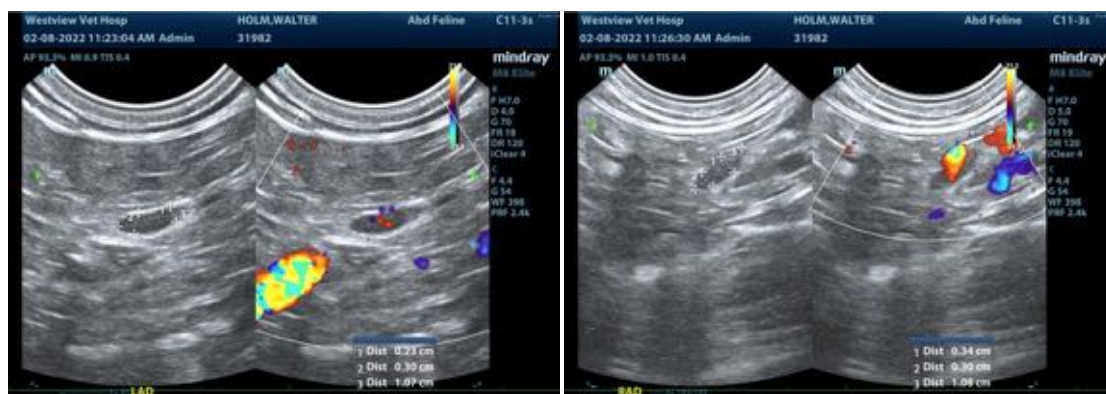
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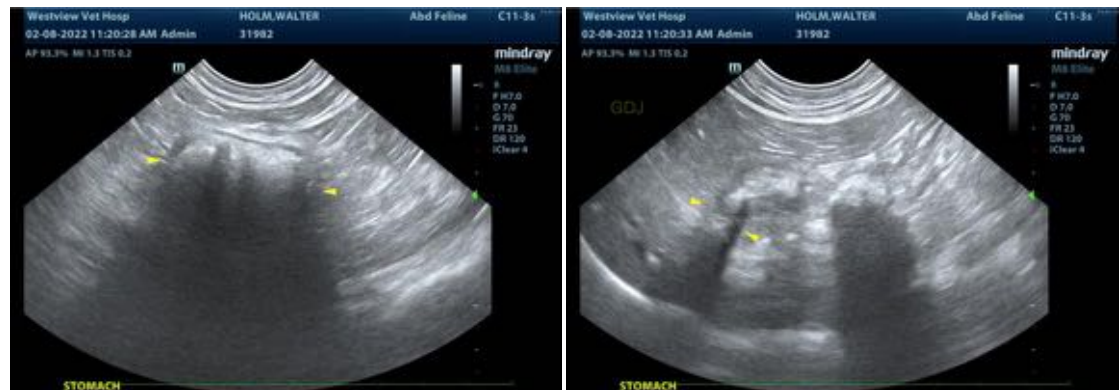
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

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