



PATIENT

Smokey Gilliam

SPECIES

Canine

BREED

Labrador Cross

SEX

Neutered male

AGE

9 years

WEIGHT

123 lbs

INTERPRETED BY

Dr Brittany Sinclair,
BVSc(hons), DACVECC

IMAGING PERFORMED BY

Dr. Gunther

HOSPITAL NAME

New Frontier AMC

REFERRING VET

Dr. Gunther

INVOICE

47948

DATE

6/26/23

PRESENTING CLINICAL SIGNS

History: Acute onset hyporexia, bloody diarrhea, vomiting blood. Febrile October 2022 - soft tissue sarcoma removed from L thigh

Abnormal PE/Chem/CBC/UA Results: CBC - hemocentration\ CHEM - hyperglycemia (254) Azotemia - creatinine 2.8 Hyperphosphatemia 7.4 ALP - mildly elevated cPL - normal

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder lumen volume is small and walls are diffusely thickened most consistent with pseudohypertrophy. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The kidneys have a smooth capsule and with hazing of corticomedullary definition to the point of inability to determine cortical/medullary ratio. There is hyperechoic shadowing in renal pelvis with no dilation consistent with non-obstructive nephrolithiasis. No evidence of pelvic dilation was present. The left kidney measured 7.38 cm and the right kidney measured 6.82 cm.

Adrenal Glands

Both adrenal glands were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 2.47 cm in length and 0.6 cm at the cranial pole and 0.62 cm at the caudal pole. The right adrenal gland measured 3.1 cm in length, 1.53 cm at the cranial pole and 0.47 cm at the caudal pole.

Spleen

The spleen was normal with a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

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 congestion. No pathological hepatic lymphadenopathy observed. Gallbladder is moderately distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally



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Gastrointestinal

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The stomach contains minimal luminal contents. It measures at a normal thickness of with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

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The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness.

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Proximal colon just aborad to the ICJ contains hypoechoic fluid consistent with reported idarrha. Colonic walls in this area are thickened with normal wall layering suggestive of inflammation. Sections of colon are visualized with gas shadowing distally. There is no generalized colon wall thickening or loss of layering.

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Pancreas

The base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

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Lymph Nodes

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No clinically significant lymphadenopathy or abnormalities noted.

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Free Abdomen

No masses or free fluid were noted.

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ULTRASONOGRAPHIC FINDINGS

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Primary Findings

1. Fluid in proximal colon, slight colonic wall thickening
2. Thickened urinary bladder wall - suspect pseudohypertrophy
3. Degenerative renal changes with nephrolithiasis

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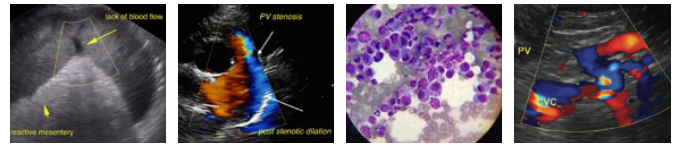
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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Colon is slightly thickened with normal curvilinear wall layering consistent with reported colitis signs. No gastric or small intestinal lesions are visualized to explain hematemesis. No changes were present in the abdomen suggestive of neoplasia, though microscopic disease cannot be definitively ruled out, this is not suspected. These changes are consistent with nonobstructive gastroenteritis. While the pancreas appeared sonographically normal, pancreatitis cannot be definitively ruled out, but normal CPL makes this an unlikely cause. Treatment is supportive and involves fluid support, GI support (anti-



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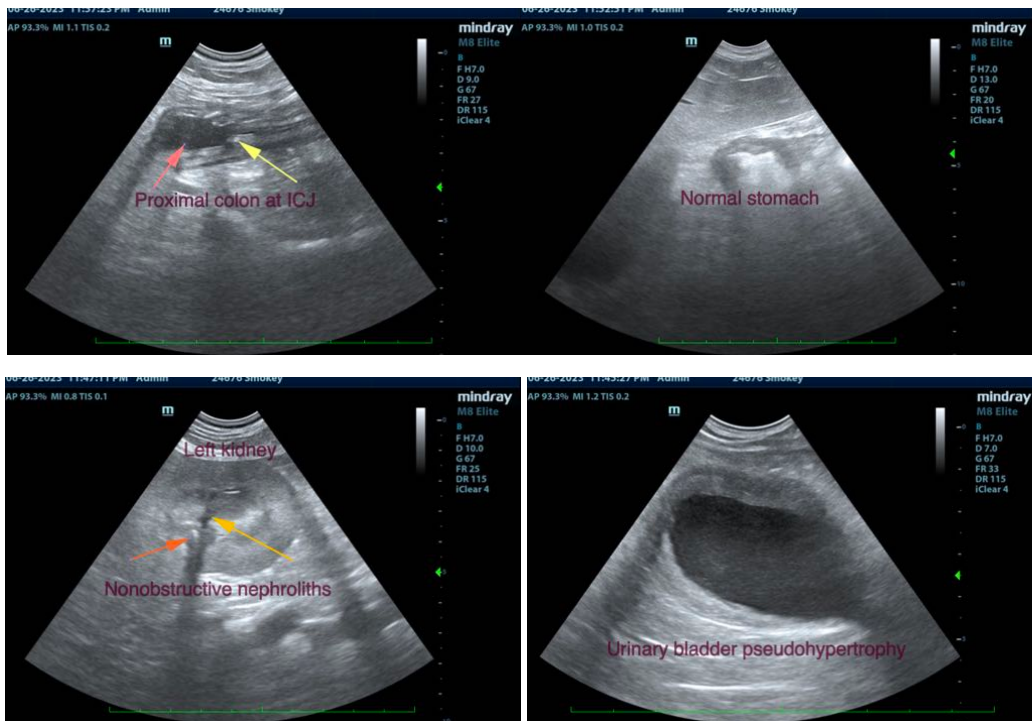
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nausea, appetite stimulant), analgesia and enteral nutrition as needed. In the face of hematemesis treatment with anti-acids is recommended (sucralfate, omeprazole – BID dosing). Antibiotics are generally not warranted. Serial imaging is indicated if clinical signs are not resolving. GI panel (TLI/PL/cobalamin/folate), baseline cortisol +/- ACTH stimulation test, fecal pathogen PCR, and empiric broad spectrum deworming and treatment with probiotics should be considered as clinically warranted. High fiber easily digestible diet may help relieve clinical signs. Ultimately GI biopsy may be required for more definitive diagnosis if clinical signs are persistent or recurrent. Endoscopy may reveal gastric and colonic luminal changes not identifiable on ultrasound.

Renal changes are likely age related degenerative changes and decreased renal function is a likely explanation for the reported azotemia and hyperphosphatemia. Correlate with blood work urinalysis findings. Nephroliths may act as a nidus of infection and predispose to urinary tract infections. They can also cause sterile inflammation leading to renal hematuria. They have the potential to move into the ureters or bladder causing obstructive uropathy.

Urinary bladder wall thickening is likely pseudohypertrophy secondary to low volume of urine and lack of luminal distension, however, true mural thickening cannot be definitively ruled out. Re-examination when urinary bladder lumen volume is increased with time and/or fluid therapy should be considered if clinical suspicion for urinary bladder disease is high.



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.

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