IMAGING PERFORMED BY

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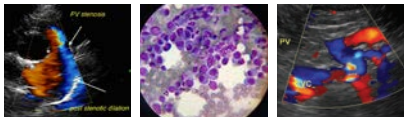

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DATE

2/16/23

PATIENT

Shiva VanDevender

SPECIES

Canine

BREED

Pomeranian

SEX

Spayed Female

AGE

9/23/12

WEIGHT

14.06 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Claws N Paws AH

REFERRING VET

Dr. Singh

INVOICE

45307

PRESENTING CLINICAL SIGNS

Presented for pain management and acute inappetence, gums had slight icteric presentation; grade III/VI systolic murmur PMI left side; evidence of crepitus both stifles, evidence of spinal reflex lumbo-sacral, evidence of severe muscle wasting both hind limb

Current Medications: adequan 100mg/mL 0.25 mL SQ q 4 days
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is mildly to moderately distended with anechoic urine. The Bladder wall is diffusely mildly thickened (0.39 cm), and the mucosa is mildly irregular. The trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of severe mucosal irregularities, masses or cystic calculi. Findings are most consistent with bacterial cystitis or lack of urine distension. Recommend urinalysis and culture.

The left kidney has a normal shape and size (4.21 cm) with pyelectasia at 0.24 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.9 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.55 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.61 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened (0.18 cm) with adherent debris. There is a large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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.

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. Duodenum wall measures 0.30 cm. Jejunum wall measures 0.25 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The right limb of the pancreas is prominent and hypoechoic as compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Mildly thickened urinary bladder wall with mild to moderate urine distention – The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient.

- Decreased corticomedullary distinction in both kidneys with left-sided pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

- Hypoechoic, prominent right limb of the pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- Mildly heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

- Large gallbladder debris with mild gallbladder wall thickening – A large amount of debris is evident in the gall bladder with no evidence of a mucocele or associated inflammation at this time. This could represent an early mucocele or cholestasis, with minimal evidence of associated inflammation at this time. Continued monitoring of labwork and ultrasound are warranted for progression of this lesion. Ursodiol therapy could be considered.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

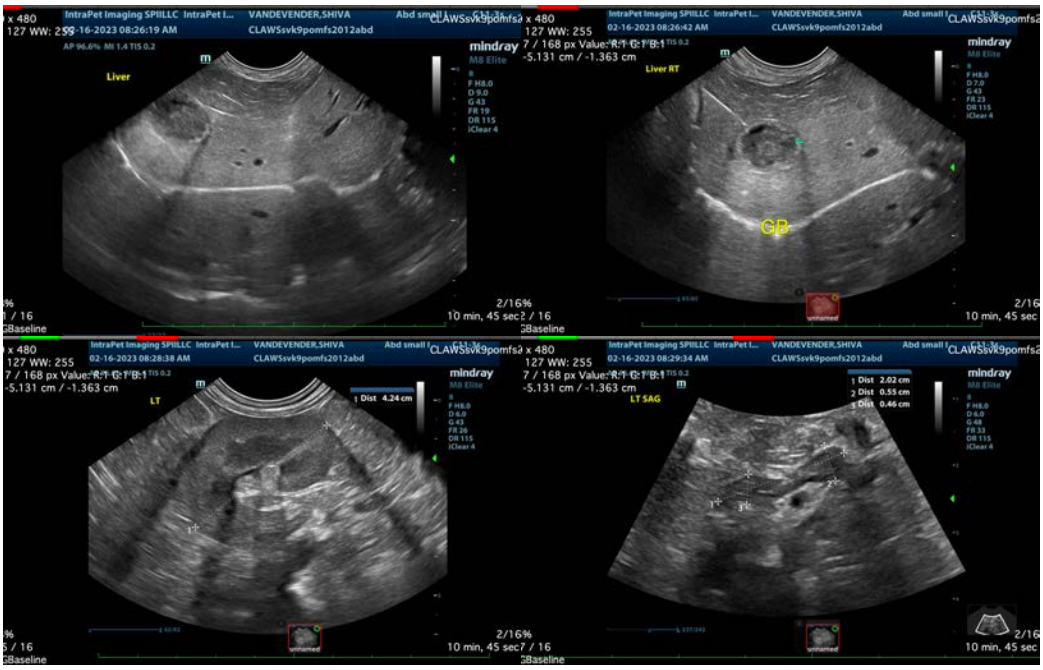
Many of the changes observed on today's scan are relatively non-specific and could be associated with age related changes. The urinary bladder appears somewhat thickened, but the lumen is not significantly distended. Given the provided urinalysis results, cystitis is a concern. Recommend urinalysis and culture (if not already done). Additionally, there is decreased corticomedullary distinction in both kidneys with no stones or mass lesions observed. These changes are consistent with age related progressive chronic renal disease. There is mild pyelectasia of the left kidney. If an infection is present, consider the possibility of mild pyelonephritis. Recommend blood pressure evaluation.

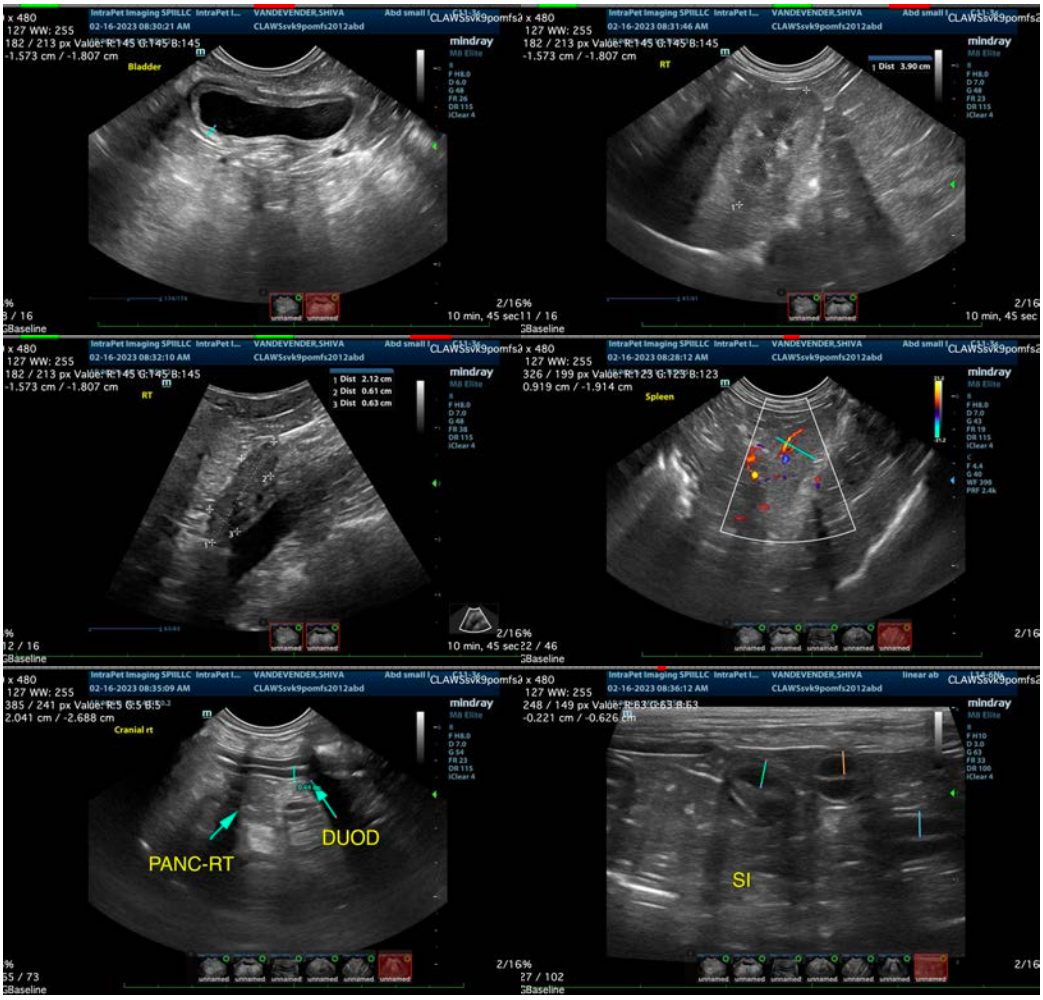
The pancreas appears slightly prominent in the right limb. Correlate these findings with a quantitative cPLI measurement. If symptoms are consistent with pancreatitis, you could consider symptomatic therapy.

The gallbladder has a large amount of intraluminal debris and minor gallbladder wall thickening/adherence of material to the gallbladder wall. Findings could be consistent with mild cholecystitis, although there is no surrounding inflammation and liver enzyme elevations are relatively mild. Recommend continued monitoring of lab work and the gallbladder on ultrasound, looking for progression of this lesion. Ursodiol therapy could be considered.

An obvious cause for the low albumin is not observed. Consider a urine protein to creatinine ratio, looking for excessive protein loss from the kidneys. This needs to be done on a urine sample without an active sediment. Additionally, you could consider a liver function test, looking for this as a source of hypoalbuminemia. If there is no excess protein loss from the kidneys and liver function is normal, then consider the possibility of underlying GI disease. Additionally, the anemia observed is regenerative, which is concerning for possible blood loss or hemolysis. Recommend evaluation of a rectal exam for the presence of melena, and you could consider anti-ulcer therapy (GI ulceration secondary to renal disease?).

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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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