IMAGING PERFORMED BY

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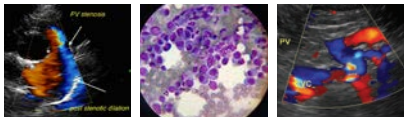

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DATE

7/3/23

PATIENT

Buffy Gretz

SPECIES

Canine

BREED

Bichon Frise

SEX

Neutered Male

AGE

6/15/12

WEIGHT

46.2 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Hickory Vet Hospital

REFERRING VET

Dr. McNesby

INVOICE

43725

PRESENTING CLINICAL SIGNS

Patient presents for a complaint of intermittent vomiting of approximately 5 weeks' duration. Rimadyl started due to lameness approx 2 1/2 months ago. Lameness responded well to Rimadyl after about 2 weeks, so Rimadyl continued on a PRN basis. Labwork 8 weeks ago wNL. Vomiting and inappetence began and owner treated with Prilosec intermittently with some response. Owner gave 60 mg Cerenia PO this morning. Physical exam - HR = 120 RR = 40 no murmur or arrhythmia, pulses strong, abdomen tense/splinting

Current Medications: Rimadyl 75 mg Q24 hrs PRN (discontinued), Prilosec OTC (omeprazole) 10 mg Q24 hours, Cerenia 40mg Q24 hours
Lab Results: Reticulocytes increased 160 K/uL, ALT increased 135 U/L(normal 100-125) ALT in May 2023 103 U/L
Radiographs: Liver - mild hepatomegaly, rounded edges, mild splenomegaly, poss mid abdominal mass (lack of detail), radiodense material within urinary bladder (cystic calculi)
Date of Previous IntraPet Ultrasound: No previous.
Sedation: IV: Dexdomitor 0.2 mg IV

Stat Report: Not requested.

Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, or masses. In the dependent portion of the urinary bladder, there is an area of hyperechoic shadowing debris consisting of small sandy debris and some small calculi (measuring approximately 0.40 cm). This mineralized material is visualized extending into the proximal urethra.

The prostate is normal in size (0.86 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (5.65 cm) with numerous non-obstructive nephroliths visualized, one of which measures 0.48 cm. Overall echogenicity is normal with adequate 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, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.63 cm) with numerous non-obstructive nephroliths, one of which measures at 0.34 cm. Overall echogenicity is normal with adequate 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, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.66 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 0.70 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. It slightly folded in position. 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. There is an ill-defined hyperechoic nodule visualized in the right side of the liver measuring 1.53 cm.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains mild fluid. It measures at a normal thickness of 0.50 cm 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 0.46 cm. Jejunum wall measures 0.37 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 pancreas is prominent and mottled 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

- Hyperechoic dependent mineralizations visualized in the urinary bladder and proximal urethra – Findings are most consistent with small stones and sandy debris.

- Numerous non-obstructive nephroliths visualized in both kidneys – The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths.

- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- Heterogeneous liver with ill-defined hyperechoic nodule – 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. The appearance of the hyperechoic nodule trends towards a benign process, although an underlying neoplastic lesion cannot be definitively ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pancreas appears slightly prominent with some areas of mild reactivity surrounding. These changes could be consistent with mild active pancreatic inflammation or previous episodes of inflammation. Correlate these findings with a quantitative cPLI level and consider empirical treatment for pancreatitis.

No focal lesions are visualized associated with the GI tract to explain the vomiting reported, although there can still be significant underlying gastrointestinal disease present with minimal ultrasonographic lesions. If treatment for pancreatitis does not result in improvement of symptoms, then consider further workup for a primary enteropathy.

- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)

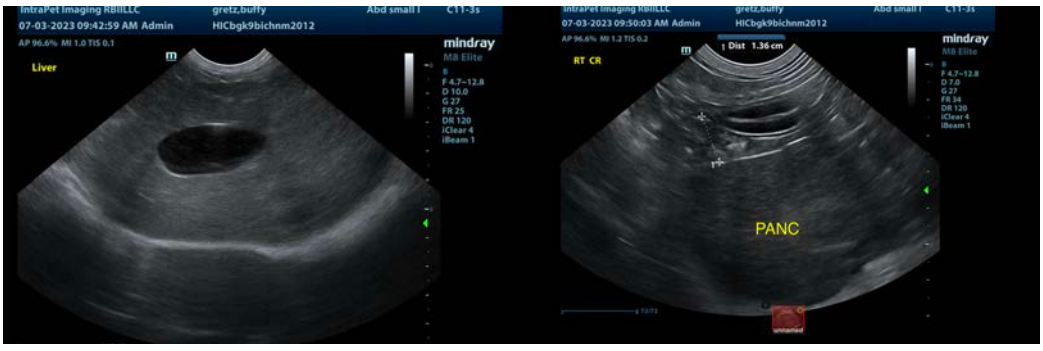
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.

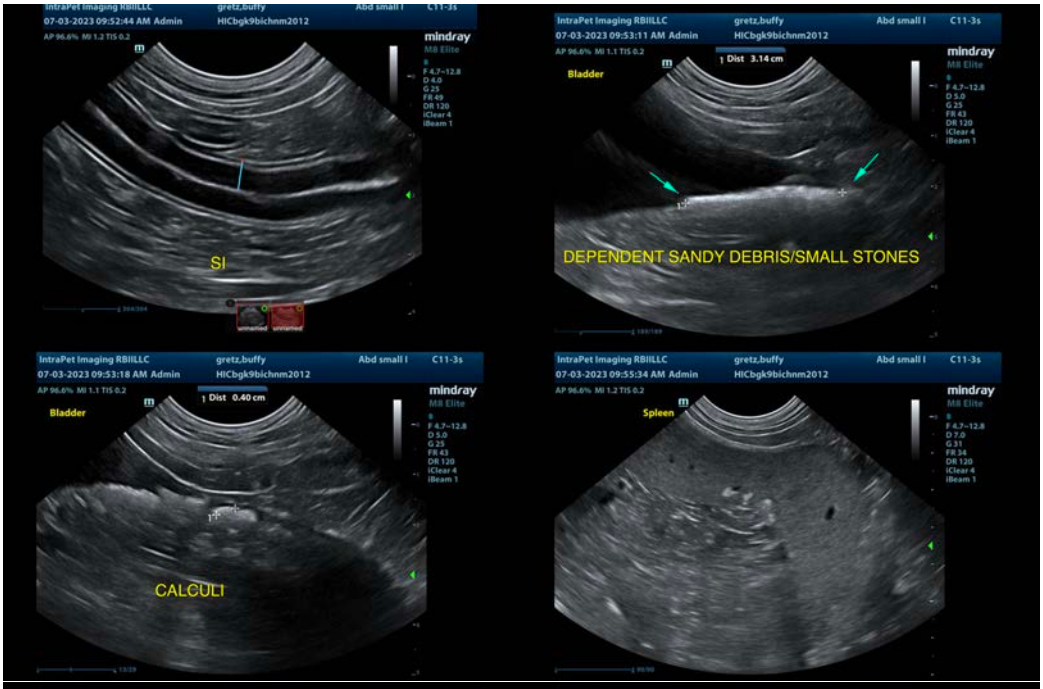
- Consider chronic probiotic therapy.

If symptoms are progressing and/or persistent and metabolic disease is thought an unlikely source of these symptoms, then GI biopsies may eventually be necessary.

There is a moderate amount of dependent sandy debris and small stones visualized in the urinary bladder. These are visualized within the urethra as well, and there are nephroliths visualized in both stones. At this time, there is no evidence of an obstructive process at either site. Correlate these findings with a urinalysis, culture, and possible radiographs. If these mineralizations are asymptomatic and there is no infection, recommend close continued monitoring for any signs of straining, obstruction, etc. Unfortunately, this is likely breed related and has the potential to progress.

The changes observed in the liver are non-specific, and at this time have the appearance of a benign process. Recommend continued monitoring of the liver enzymes. If progression elevations are noted, you could consider a liver function test, repeat imaging, fine needle aspirate, etc.

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1 Dist 2.29 cm
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3 Dist 0.63 cm
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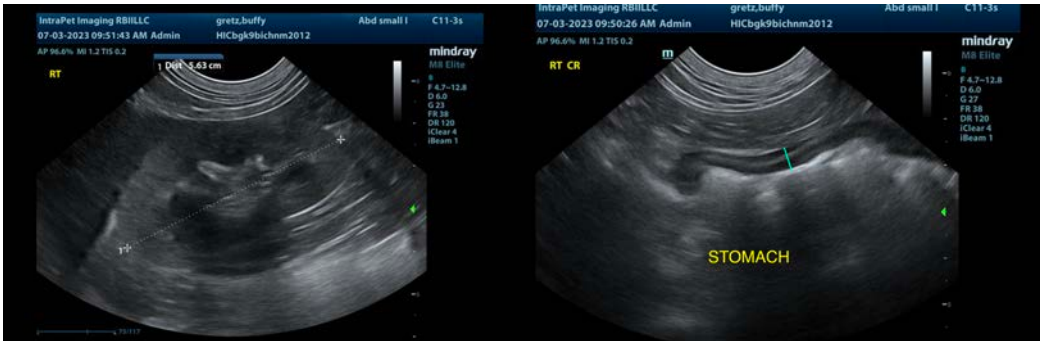
3 Dist 0.67 cm



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.

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