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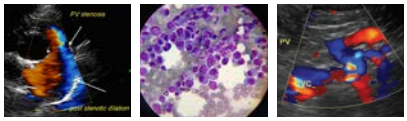
IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

8/30/22

PATIENT

Bandit Harper

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

6/1/12

WEIGHT

10.9 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Stephanie Warga RDCS, RVT

HOSPITAL NAME

Honeygo AH

REFERRING VET

Dr. Wright

INVOICE

40859

PRESENTING CLINICAL SIGNS

Pet had a p/u surgery in 2021 after reblocking. Has been on s/o since. Recently- having very bloody urine and some hard stools. Urinating inappropriately and grumpy with the other household cats.

Current Medications: treated with convenia injection and baytril 22 mg SID x 10 days- on 8/13, added benefiber to the s/o (mostly canned) and began prozac 5 mg on 8/27
Lab Results: had very bloody urine- have not been able to get recent urinalysis (pet urinates in the carrier)- but not grossly bloody.

Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.60 cm). Mucosa is hyperechoic and irregular. There is a large amount of mineral/crystal debris throughout the lumen of the urinary bladder, including a 0.36 cm cystolith right at the entrance of the proximal urethra. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

Kidneys are normal in size with increased cortical echogenicity. Normal smooth peripheral margination and shape are maintained. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. Infiltrative disease (infectious, neoplastic, etc.) or nephritis cannot be ruled out but is considered less likely. The left measures 4.27 cm. The right measures 4.1 cm.

Adrenal Glands

The right adrenal gland is normal in size (0.35 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.46 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of mildly thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen is empty with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

- **Chronic Cystitis -** Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes. Mineral debris is noted within the urinary bladder, including a small cystolith that appears to be at the entrance of the proximal urethra.

- **Inflammatory bowel disease (IBD) pattern –** Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.

- **Reactive mesenteric lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.

- **Pancreatic age-related remodeling –** Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A urine culture is recommended if not recently evaluated to rule out an occult urinary tract infection.

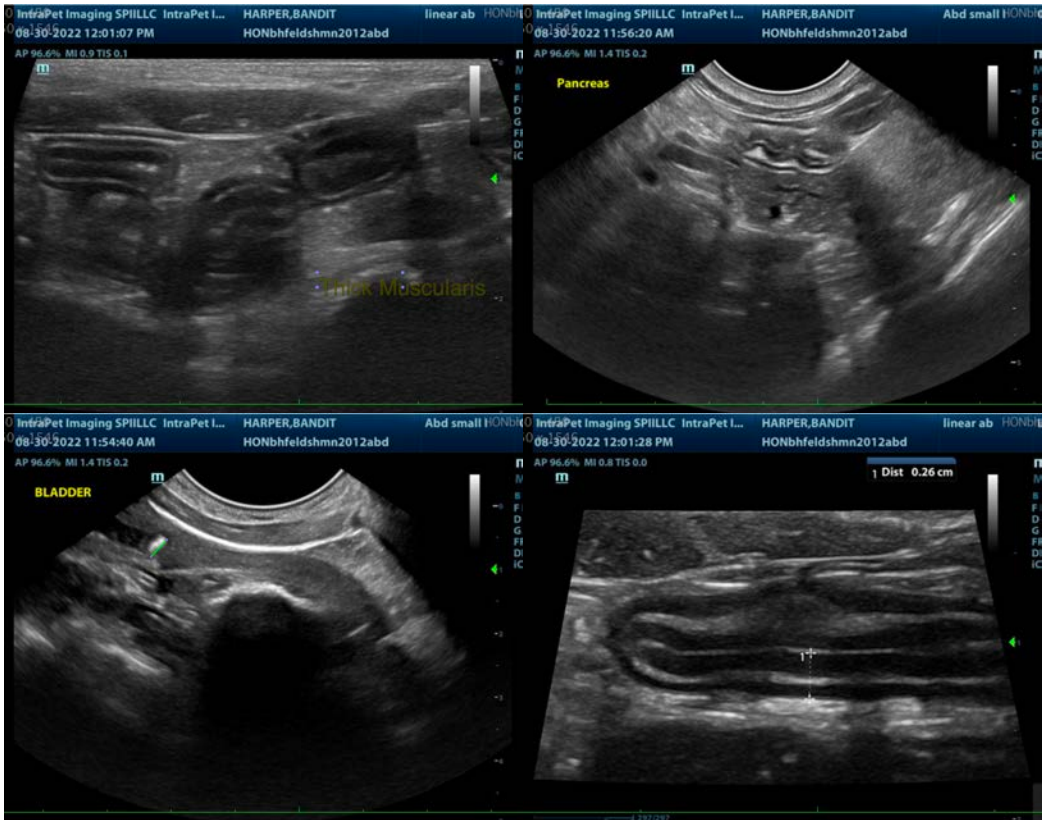
Options to address the mineral present at this time, from conservative to aggressive, include considering a urethral muscle relaxant to see if that will aid passage of the mineral on its own given the previous P/U surgery, versus a bladder flush in the form of voiding urohydropropulsion, versus ultimately a repeat cystotomy if the mineral does not pass and clinical signs persist.

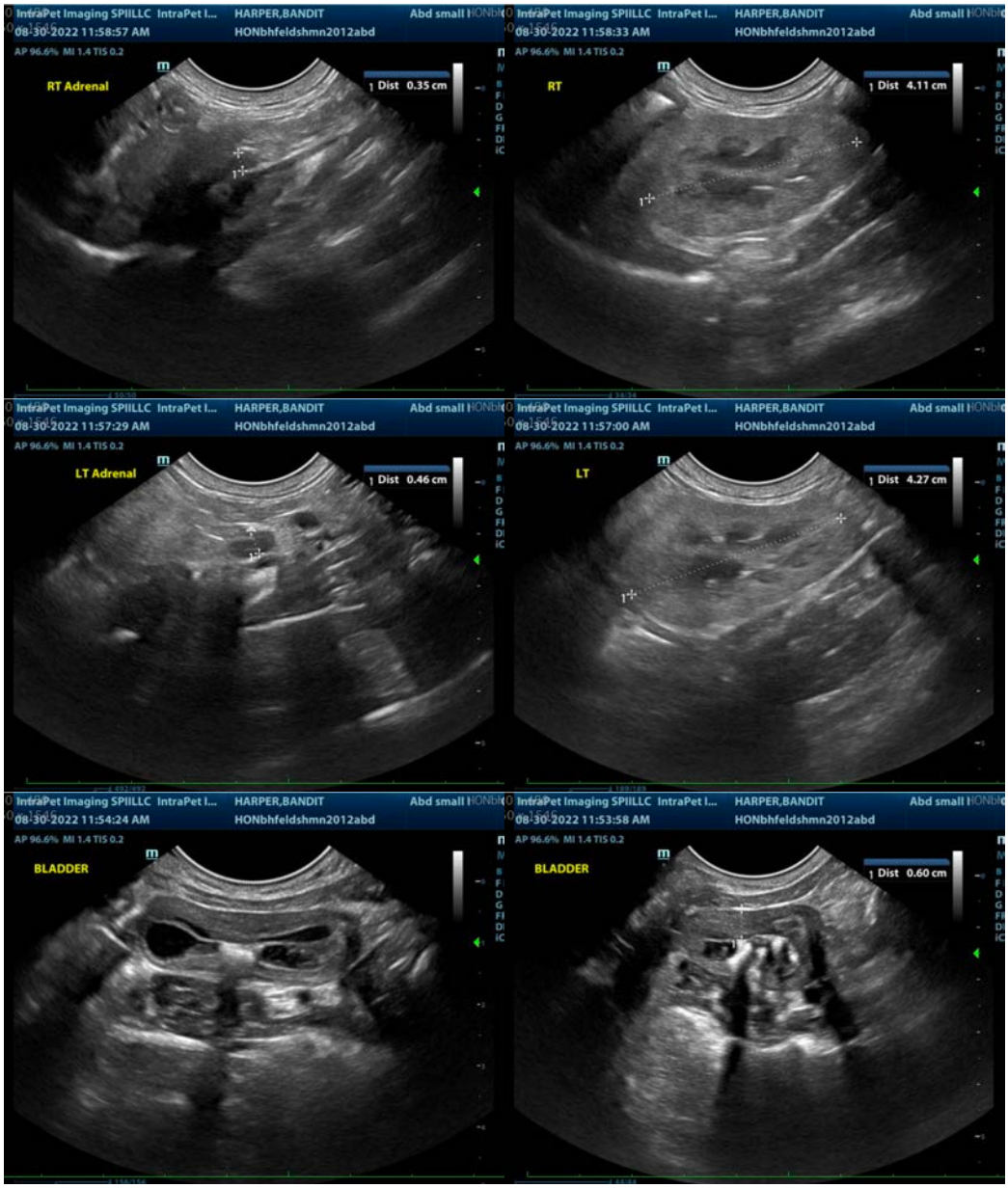
Given the concurrent gastrointestinal signs and bowel changes in this ultrasound, A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

In the meantime, empirical deworming with a 5-day course of Panacur is recommended as well as the reportedly already in place fiber supplement to the diet. If firm stool is present, a stool softener such as lactulose may offer some relief.

Ultimately, biopsies of the GI tract may be necessary to definitively diagnose and therefore manage suspected infiltrative bowel disease if clinical signs persist. However, the emergent problem in this patient appears to be his urinary disease.

Hydration is very important for this patient's combination of bladder health and reportedly firm stools. Therefore, alternative approaches to hydration by adding water to food, considering indoor water fountains, sink drips, etc. may be helpful if that encourages the patient to drink more water.





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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com