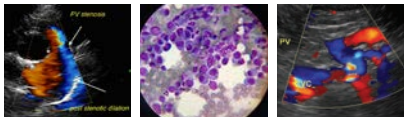
IMAGING PERFORMED BY

IntraPet.com



SonoPath
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DATE

7/30/23

PATIENT

Tucker Egan

SPECIES

Canine

BREED

Shih Tzu x

SEX

Neutered Male

AGE

10/2/11

WEIGHT

16 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Fullerton AH

REFERRING VET

Dr. Durastanti

INVOICE

44225

PRESENTING CLINICAL SIGNS

Patient presented 6/27 for general wellness exam and senior BW. Has previously been worked up for chronic diarrhea back in March 2022. Since then, P has been maintained on Royal Canin GI low fat, and a sprinkle of tylosin SID. She cooks ground beef and rice for him in the evening. O reports that P still has breakthrough episodes of anorexia and vomiting, which typically self resolve. No recent episodes of diarrhea or blood in stool. On senior lab work, it was found incidentally that P has an elevated BUN, and a persistent USG in the 1.020's range. We had O catch multiple urine samples throughout the day to verify this. O reports that P drinks a lot of water and this is chronic/normal for him.

Current Medications: Tylosin ~ 1/8 tsp once/day.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: 3/17/22. See attached.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, BS, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

Kidneys are bilaterally irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. There is no pyelectasia noted and no mineral is observed. The left kidney measured 3.88 cm. The right kidney measured 4.12 cm.

Adrenal Glands

The right adrenal gland is normal in size (0.32 cm at the at the cranial pole and 0.44 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.35 cm at the cranial pole and 0.34 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

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). Multifocal well-demarcated hyperechoic homogenous nodules are noted. 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.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

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 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 pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. 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.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **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.

- **Chronic Kidney Disease –** This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc.

SECONDARY FINDINGS

- **Hyperechoic splenic nodules –** most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

- **Mild gallbladder debris -** Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient's reported laboratory changes, isosthenuria, PU/PD, etc. could be secondary to chronic kidney disease versus other.

The chronic intermittent gastrointestinal signs are likely secondary to infiltrative bowel disease, given the changes described above. Recommendations include:

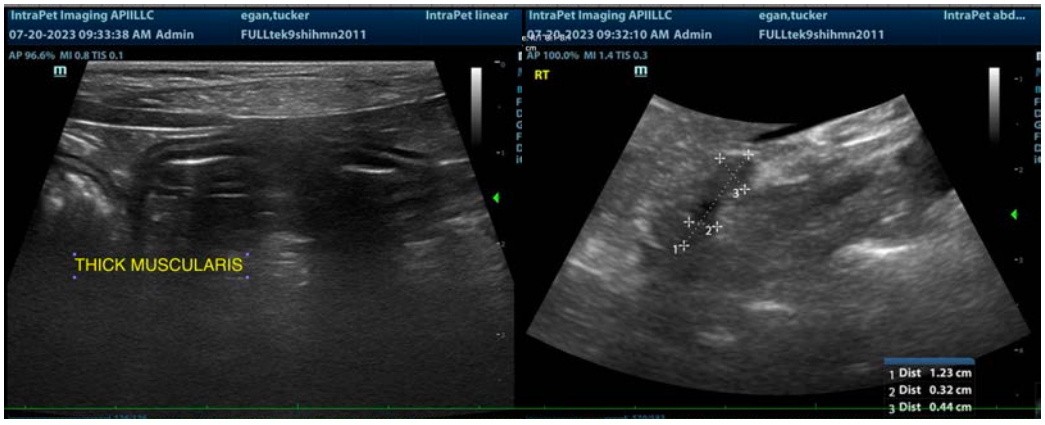
A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

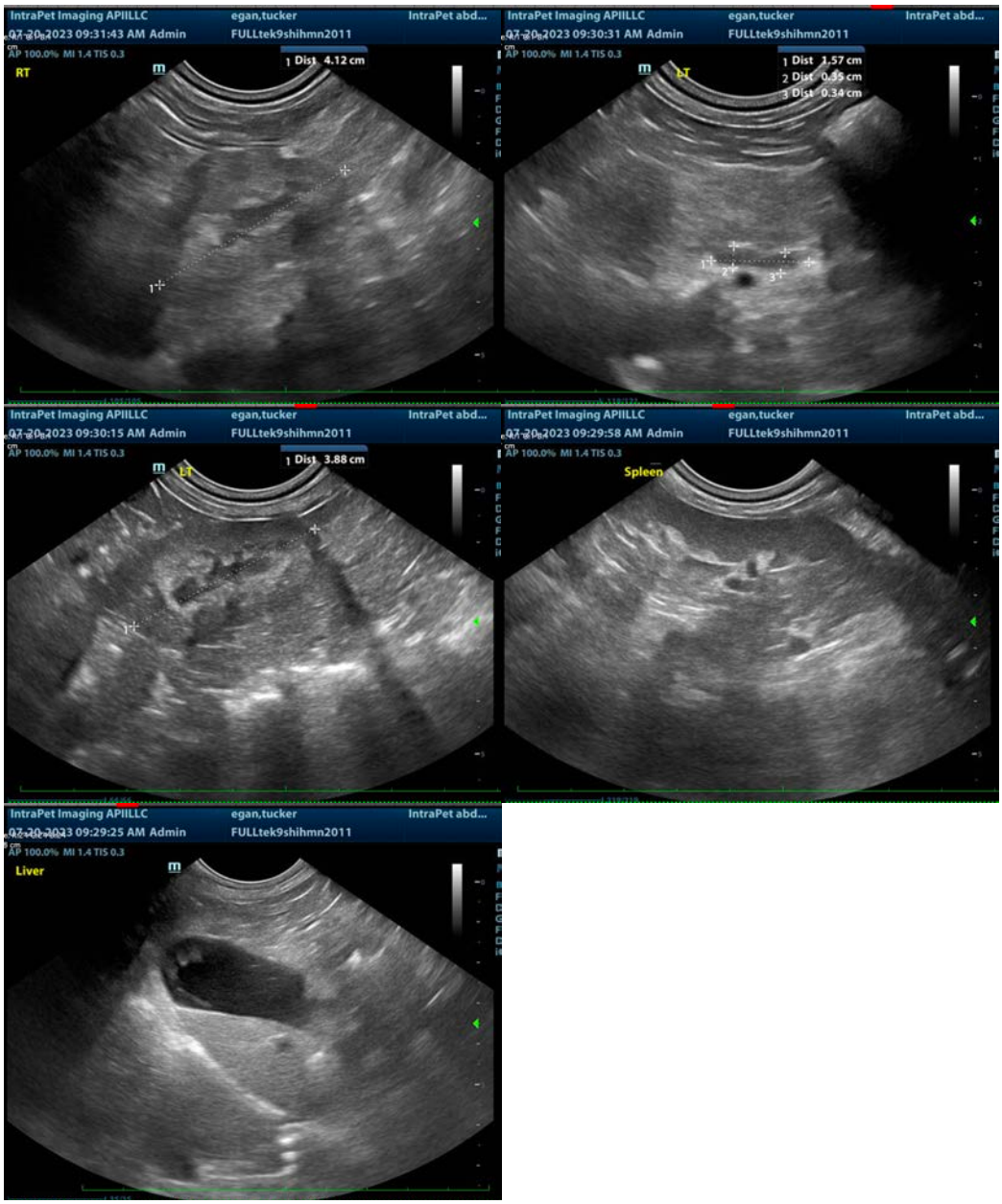
A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease. Contact the lab for recommendations on how long to discontinue antibiotics prior to obtaining a stool sample for submission.

In the meantime, supportive/symptomatic medical management of clinical signs is recommended, including a probiotic (such as visbiome or proviable), empirical deworming with a 5-day course of Panacur and, if tolerated, a transition in diet, based on trial-and-error response, beginning with a hydrolyzed protein diet. Some patients respond to one brand/version of a hydrolyzed protein diet better than another brand, so several attempts may be required.

Ultimately, if clinical signs persist, and a diagnosis is not reached, further evaluation of the GI tract via upper and lower endoscopy for visualization and biopsies may be warranted.





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
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