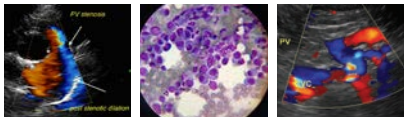
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
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DATE

7/13/23

PATIENT

Barklay McGuire

SPECIES

Canine

BREED

West Highland Terrier

SEX

Neutered Male

AGE

7/24/13

WEIGHT

20 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Everhart Vet Hospital

REFERRING VET

Dr. Kerr

INVOICE

43820

PRESENTING CLINICAL SIGNS

Patient presented on 7/3/23 for lethargy and excessive drinking of water to the point of vomiting. Physical exam was largely within normal limits.

Current Medications: TRAZODONE HCL 50MG 7/3/2023, SIMPARICA TRIO 11.1 - 22 LBS SINGLE 7/3/2023, Cerenia 24mg tablet 7/3/2023, Cerenia Injection 10mg/mL 7/3/2023.
Lab Results: ALP 541, Glucose 534, Triglycerides 330, Amylase 7409, PSL 3798.
Radiographs: Minimal gall bladder sludge. Kidneys, intestines, and bladder all appear normal. Brief ultrasound - well circumscribed section of cranial liver that is hypoechoic to surrounding liver parenchyma.
Date of Previous IntraPet Ultrasound: 6/30/22. 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.

The area of the prostate is examined without evident prostatic pathology.

The right kidney is normal in size (4.12 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal in size (4.65 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

Adrenal Glands

The right adrenal gland is normal in size (0.50 cm at the cranial pole and 0.56 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 (0.42 cm at the cranial pole and 0.57 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen has been previously removed.

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. Multifocal, small, less than 1.0 cm cysts are noted throughout the parenchyma, as well as intrahepatic biliary mineral. 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. There is some mineral debris, and small non-shadowing cholecystoliths can't be definitively ruled out. 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 intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

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.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- **Hyperechoic hepatomegaly and multifocal small hepatic cysts and intrahepatic biliary mineral -** This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible but considered less likely.

- **Mild to moderate 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.

- **Bilateral medullary rim sign -** This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

- **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.

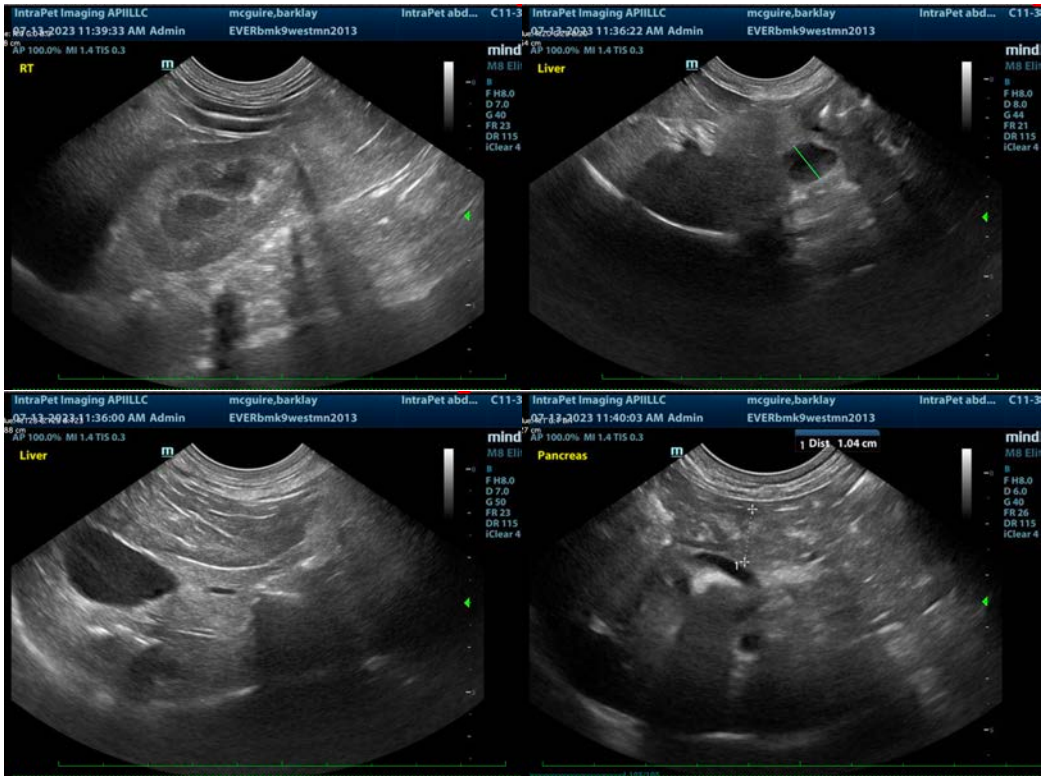
- The spleen has been previously removed.

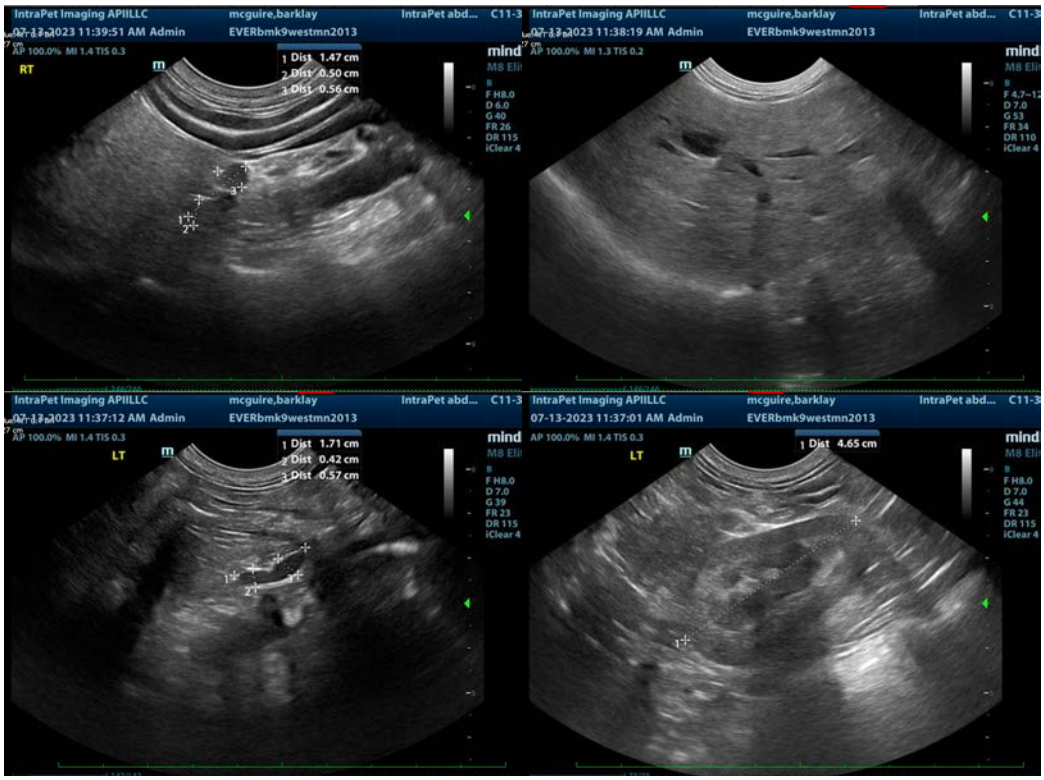
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient's reported severe PU/PD is most likely related to what appears to be newly diagnosed diabetes mellitus. Most of the described ultrasound changes could also be consistent with diabetes mellitus. Concurrent cholangiohepatitis or other complications from the biliary mineral can't be ruled out, but are likely a small, if any, contributing factor.

If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

Beyond that, supportive/symptomatic medical management of clinical signs as indicated is recommended while beginning insulin therapy to try to regulate diabetes mellitus and the concurrently the reported PU/PD.





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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