

**DATE PRESENTING CLINICAL SIGNS**

8.22.2022

Intermittent history of diarrhea. Responds to metronidazole and probiotics. History of heartworm and roundworms when acquired. Pet recently had hookworms that have resolved but diarrhea recurred. Recent lab work screening for Addison's and chemistries showed PSL and amylase elevation. Otherwise NSF.

**PATIENT**

Penny Chapdelaine

Current Medications: metronidazole 500 mg BID intermittently, Provable long-term  
 Lab Results: amyl 1407, PSL 718.

**SPECIES**

Canine

Date of Previous IntraPet Ultrasound: No previous.  
 Sedation: Not required to complete full diagnostic ultrasound.  
 Stat Report: Not requested.  
 Imaging Performed By: Andi Parkinson, BS, RDMS.

**BREED**

Labrador

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****SEX**

Spayed Female

**Urinary System**

The **urinary bladder** wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

**AGE**

11/16/2020

The **left kidney** is normal size (6.57 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

**WEIGHT**

63.4 lbs

The **right kidney** is normal size (6.36 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

**INTERPRETED BY**

Andrea Nicastro, DMV,  
 Diplomate DACVIM  
 (Small Animal  
 Internal Medicine)

**Adrenal Glands**

The **left adrenal gland** is normal in length (0.38 cm at cranial pole) (0.40 cm at caudal pole) (2.88 cm in length); with a flattened contour; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**HOSPITAL NAME**

Everhart VH

The **right adrenal gland** is normal size (0.58 cm at cranial pole) (0.60 cm at caudal pole) (2.73 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**REFERRING VET**

Dr. Notarangelo

**Spleen**

The **spleen** is normal in size (1.60 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**INVOICE**

11473

**Liver**

The **liver** is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The **gall bladder** is of normal contours and contains some dependent echogenic debris. The wall is normal

in thickness. No choleliths are observed. The cystic and common bile ducts are normal/not seen.

#### ***Gastrointestinal***

The **stomach and intestine** are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

#### ***Pancreas***

The region of the **pancreas** is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

#### ***Free Abdomen***

The **peritoneal cavity** is normal. There is no evidence of inflammation or effusion. The abdominal **lymph nodes** are normal/not visible.

### **ULTRASONOGRAPHIC FINDINGS**

#### **Primary Findings**

- Given the resting cortisol level, the flattened left adrenal gland is suspected to be a normal variant for this patient. However, early atrophy (i.e., due to emerging hypoadrenocorticism) cannot be excluded.

\*An obvious cause for the patient's chronic, intermittent diarrhea is not definitively identified in this study. Differentials include microscopic gastrointestinal disease (i.e., food intolerance/allergy, inflammatory bowel disease, infectious/parasitic disease, underlying metabolic issue) mild pancreatitis, other.

### **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Give the history of intestinal parasites, a repeat fecal evaluation for ova and Giardia, as well as prophylactic deworming with Fenbendazole should be considered.
- A malabsorption panel including serum cobalamin and folate, TLI and PLI is also recommended.
- If the resting cortisol level is >2.00 mcg/dL, hypoadrenocorticism is unlikely. However, a small percentage of cases may have a cortisol level of above 2.00. Therefore, a full ACTH stimulation test can be considered to help rule out this disease, particularly if the resting cortisol level is near/around 2.00 mcg/dL.
- Consider a 6-week novel protein diet trial to assess for food allergies.
- Also consider empirical treatment for small intestinal bacterial overgrowth with a 4-week course of Tylosin.
- If the above diagnostic/therapeutics are inconclusive and the patient's diarrhea persists, GI biopsies (i.e., endoscopic or surgical) may be necessary to get a definitive diagnosis.



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.

**Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
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