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**DATE PRESENTING CLINICAL SIGNS**

6/9/22 Weight loss. Vocalizing before and after litterbox use, not during. Stools have become progressively dry. Hx of hyperthyroid- controlled.

**PATIENT**

Visas Murr Martinez

Current Medications: Felimazole 7.5mg PO per day.  
Date of Previous IntraPet Ultrasound: No previous.  
Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Not requested.

**SPECIES**

Feline

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

12/30/06

**WEIGHT**

8.16 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Andi Parkinson RDMS

**HOSPITAL NAME**

Eastern AH

**REFERRING VET**

Dr. Michelotti

**INVOICE**

38575

**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 a pinpoint hyperechoic shadowing focus, most consistent with a small calculus measuring 0.12 cm.

The left kidney has a normal shape and size (2.81 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.25 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.33 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/borderline large in size measuring 0.56 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. 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 homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a mild amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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 uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Visualized peristalsis appears appropriate. While the muscularis layer was diffusely thickened, there is a focal area of bowel where this muscularis thickening is more prominent and asymmetrical, which is concerning for an emerging focal bowel lesion. In this area, the bowel wall thickness is 0.55 cm.

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 hypoechoic as 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**

- Small focal calculus in the dependent portion of the urinary bladder – recommend urinalysis and culture and continued monitoring of this lesion. It is possible that this could be small enough to pass.
- Prominent, hypoechoic pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Mild gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Borderline large right adrenal gland – The significance of this is unclear, as the adrenal gland appears relatively normal in shape and appearance. This could represent an incidental finding or early neoplastic lesion.
- Prominent muscularis layer with focal asymmetrical wall thickening observed – The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma. The area of focal wall thickening is concerning for an emerging bowel mass.

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

There is a diffuse prominence of the muscularis layer of the small intestine, which could be an indication of inflammatory disease of the small intestine, but there is a concerning area where this diffuse thickening worsens and becomes somewhat asymmetrical. This is a subjective finding and could represent an anatomic variant, but the concern is that this could represent an early focal bowel lesion.

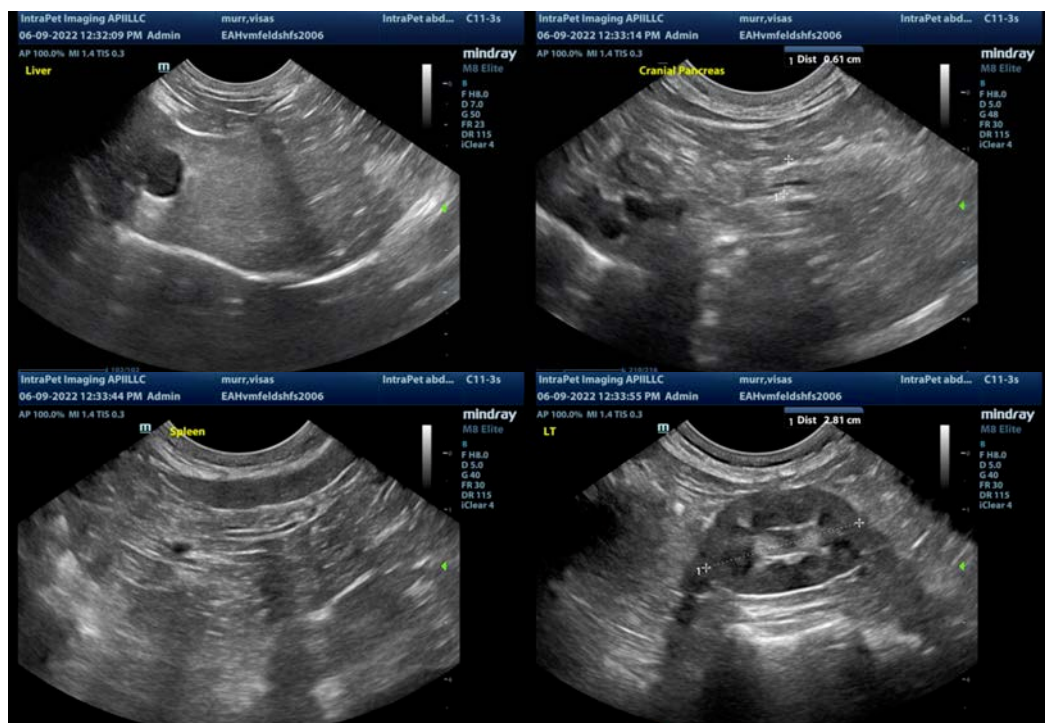
Options moving forward would include workup for diffuse disease and reevaluation for this lesion with ultrasound, or the option for surgical explore with biopsies and careful evaluation of the small intestine for a possible early mass lesion. I suspect this is a subtle lesion at this time, and may be difficult to identify, so the former plan seems more appropriate at this time, but both have merit.

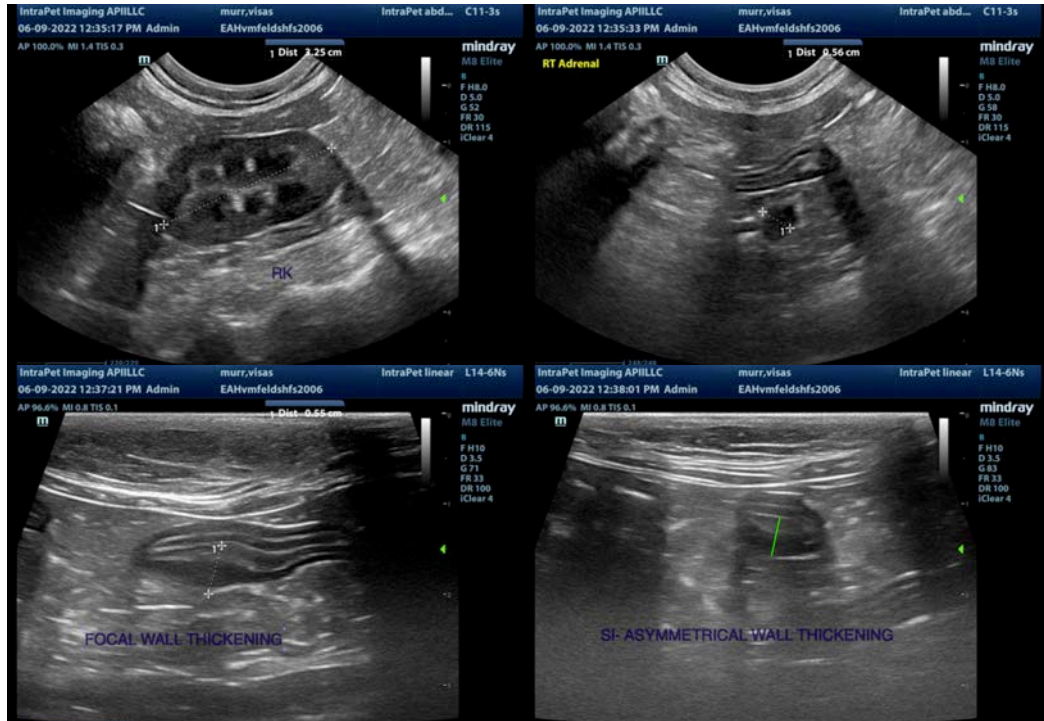
Possible causes for weight loss and muscularis thickening include dietary intolerance/food allergy, dysbiosis, intestinal parasitism, IBD, and less likely intestinal neoplasia.

- Consider a novel protein/hydrolyzed protein prescription diet.
- Recommend a GI panel with quantitative fPLI, TLI, cobalamin and folate to further evaluate the pancreas and small intestinal changes observed.
- Consider symptomatic therapy for chronic pancreatitis/gastroenteritis.
- If symptoms persist, consider reimaging and consider obtaining GI biopsies.
- Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

The right adrenal gland is somewhat prominent and large compared to the left, but it has a normal shape and appearance. The significance of this is unclear. At this time, I would recommend blood pressure evaluation and evaluation of electrolytes to look for any changes consistent with hyperaldosteronism. Additionally, continued monitoring for any symptoms that could correlate with the cortisol excess (hyperglycemia, skin lesions, etc.), and recommend reevaluation of the adrenal gland with ultrasound in 2-3 months, looking for any significant changes.

Consider a urinalysis and culture and continued monitoring of urination habits to look for evidence of issues associated with the small calculus observed.





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.

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