



**PATIENT PRESENTING CLINICAL SIGNS**

Lulu Batmanghelidj

Patient has recently been losing weight and not eating as well as normal. No vomiting/diarrhea seen. Has a history of allergies/pyoderma, hypothyroidism(11/16), hypertension (dx 6/20), neurogenic KCS OS (dx 1/19). Had a major surgery July 2012- partial splenectomy due to mass, cystotomy w/ bladder wall bx/culture, and drainage of R renal cyst

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: Aug 2021 cbc: platelets 719,000; for last 3 yrs had ranged from 625-860,000; alk phos 1619, T4 2.2; Jan 2021, chem: alk phos 1396, T4 1.4 Weight hx: 9/20 =16 #; Jan 2021 = 14.88 #; 8/4/21 = 12.8; 8/18 = 13.88; so up a bit in weight; Current Meds: Amlodipine 2.5 mg BID Apoquel 3.6 mg SId Thyro - tabs 0.1 mg BID enalapril 2.5 mg BID

**BREED**

Shih Tzu

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**SEX**

Spayed Female

The urinary bladder presented uniformly thickened urinary bladder wall isoechoic to the adjacent normal urinary bladder wall. The luminal margin of the thickened urinary bladder wall was mildly asymmetrical in contour. Mineralization or echogenic foci within the thickened areas of urinary bladder wall was not present. Apical urinary bladder wall measured 0.47 cm in width. Urethra normal in structure and tone to a depth of 2.0 cm.

**AGE**

16 Years

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. A persistent, moderately sized, thinly walled cyst containing anechoic fluid and potential minor mineral present in the right kidney. The cyst measured approximately 0.31 cm in diameter.

**WEIGHT**

13.88

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**Adrenal Glands**

The left adrenal gland exhibited generalized enlargement with minor asymmetrical yet intact capsule contour and heterogeneous parenchyma. No evidence of parenchymal mineralization, capsular escape or overt vascular invasion. The left adrenal gland measured 2.0 cm length x 0.5 cm at the cranial pole and 0.96 cm at the caudal pole. The right adrenal gland was indistinctly visualized, subjectively measuring 0.69 cm at the caudal pole.

**IMAGING PERFORMED BY**

Dr. Mavis McCormick-  
Rantze

**Spleen**

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease. No evidence of recurring splenic mass.

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**Liver**  
The liver exhibited potential for mild generalized enlargement. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non distended in size with mild, echogenic, nonmineralized biliary sludge. The cystic duct and common bile ducts were normal without evidence of dilation.

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**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained echogenic, nonshadowing ingesta most consistent with post prandial presentation without signs of ileus, obstruction or foreign material. Gastric body wall measured 0.30 cm.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. Intermittent mild jejunal mucosal speckling was present. Duodenum wall measured 0.37 cm. Jejunum wall measured 0.34 cm.

Normal visible colon wall layers were present with apparent formed feces in lumen.

**Pancreas**

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

- Mild cystitis pattern
- Bilateral chronic renal changes with persistent right kidney cyst
- Sonographically unremarkable spleen
- Left adrenomegaly – non-specific, functional versus non-functional adenomatous change, age related/benign hyperplasia, emerging neoplasia such as adenocarcinoma, pheochromocytoma or other possible.
- Hepatopathy – subjectively benign
- Mild gallbladder debris (non-mucocele)
- Gastric ingesta with subjective minor enteritis pattern

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The presence of gastric ingesta is nonspecific and likely indicates post-prandial presentation. Correlation with most recent meal ingestion is recommended. If documented NPO prior to the ultrasound, the presence of gastric ingesta may indicate some degree of gastric hypomotility or metabolic stasis. The sonographic presentation of the ingesta was most consistent with food, without evidence of foreign material.

Full adrenal workup including LDDST (given the thrombocytosis or if clinical signs suggestive of hyperadrenocorticism) is recommended. Urine catecholamine levels may also be considered (given the patient's hypertension) to assess for evidence of pheochromocytoma.

Potential for underlying inflammatory enteropathy is possible, although no evidence of significant mural changes noted. Given the patient's weight loss, further assessment may include GI panel to include PLI, TLI, cobalamin and folate. 3-view chest radiographs may be considered if not yet done to rule out occult thoracic pathology, which may account for weight loss in geriatric patients.



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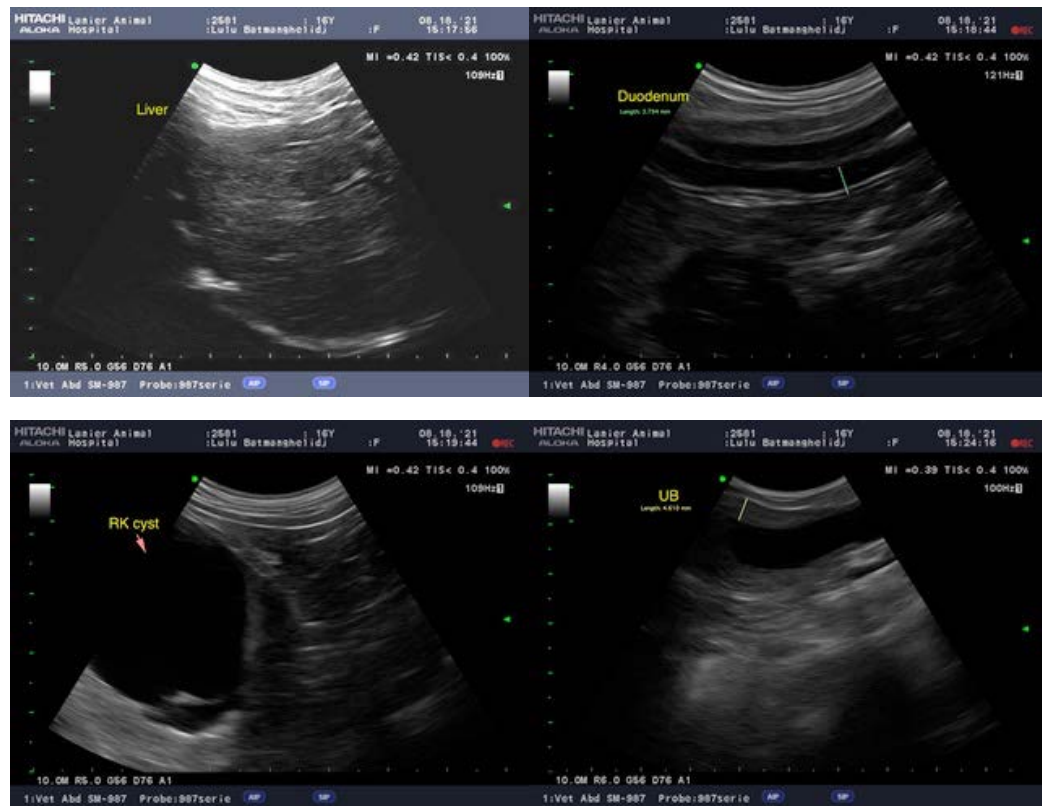
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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