



PATIENT

Lily Lewis

SPECIES

Canine

BREED

Maltese

SEX

Spayed

AGE

10 years, 7 mos

WEIGHT

19 lbs

INTERPRETED BY

Andrea Nicastro, DVM,
Diplomate ACVIM (Small
Animal Internal Medicine)

**IMAGING
PERFORMED BY**

Loetitia Saint-Jacques,
RVT LVT

HOSPITAL NAME

No Hills VC

REFERRING VET

Dr. David Bagget

INVOICE

10990

DATE

5/26/22

PRESENTING CLINICAL SIGNS

History: High SDMA/BUN and Crea back in Feb (see labs in lab section)- hospitalized for 3 days on IVF and then SDMA was 30, BUN 4, Crea 1.1. 05-13-22 notes: This patient had bladder stones removed at an emergency clinic long ago. Never had stone analysis done. we did rads earlier... stone present in bladder. Unsure if present in kidneys. Was having serious kidney issues at then but now kidney values are ok. Discussed doing an ultrasound for kidneys/bladder. Assuming stones are still in bladder, we will set up a cystostomy afterwards.

Abnormal PE/Chem/CBC/UA Results: UA_Analyzer 02-09-22 10:49a Collec Cystocentesis Color Orange Clar Opaque SG 1.020 pH 8.0 LEU neg PRO 500 mg/dL GLU neg KET neg UBG 4 mg/dL BIL 3 mg/dL BLD 250 CHEMISTRY GLU 81 70 143 mg/dL SDMA > 100 0 14 µg/dL CREA 2.0 H 0.5 1.8 mg/dL BUN 47 H 7 27 mg/dL BUN/CREA 24 PHOS 5.6 2.5 6.8 mg/dL CA 9.8 7.9 12.0 mg/dL TP 7.4 5.2 8.2 g/dL ALB 2.7 2.2 3.9 g/dL GLOB 4.7 H 2.5 4.5 g/dL high alt 137, ast 330 and alk phos 171. rbc / wbc, bacteria, struvites in urine.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is mildly to moderately distended with anechoic urine. The wall in the region of the apex is mildly thickened (up to 0.38 cm) with an irregular mucosal surface. The wall tapers to a normal thickness as it extends toward the urinary bladder neck. Numerous, varying-sized cystic calculi and mineralized sand are observed within the lumen, along with a moderate amount of suspended echogenic debris. The region of the trigone appears normal. The mineralized sand appears to extend into the proximal urethra. Focus of mineralizations are observed more distally in the urethra and may be within the lumen or may represent a mineralization of the mucosal surface. The urethra is visible to a depth of 3-4 cm,

The left kidney is normal in size (5.20 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

The right kidney is normal in size (5.89 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

Adrenal Glands

The left adrenal gland is normal size (0.46 cm at cranial pole) (0.43 cm at caudal pole) (1.92 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.

The right adrenal gland is normal size (0.41 cm at cranial pole) (0.39 cm at caudal pole) (2.50 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.

Spleen

The spleen is normal in size (1.86 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 1.13 x 1.16 cm round, heterogenous,



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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 distended. The wall is normal in thickness. A moderate to large amount of aggregated, echogenic suspended sludge, with a slight reticulated pattern is observed within the lumen. 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 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. No obstructive or overt infiltrative disease is noted.

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

An area of reactive mesentery is extending from the mid- to caudal abdominal cavity. Trace free fluid is observed. A 0.93 cm left medial iliac lymph node is visualized. A few, prominent mesentery lymph nodes are also visualized, the largest measuring 4.35 cm in length. The nodes are normal in size and echogenicity. Surrounding mesentery is hyperechoic.

Other

A uterine stump is visible (0.37 cm in width). No obvious pathology is observed.

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Cystic calculi with mineralized sand extending into the proximal urethra. The bladder wall changes in the region of the apex are suggestive of cystitis.
- The splenic nodule could be consistent with an emerging tumor (i.e., hemangioma, hemangiosarcoma). Alternatively, a benign process may be present.



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- The gall bladder changes are consistent with an emerging mucocele.
- The hyperechoic mesentery is suggestive of peritonitis, the cause of which is unclear.

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Secondary Findings

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- If an aggressive approach is desired, consider a cystotomy with stone removal, analysis and culture, as well as a splenectomy +/- cholecystectomy. If this type of surgery is pursued, consider referral to a board-certified surgeon due to the potential for perioperative complications. Given the patient's age, thoracic radiographs are recommended prior to anesthesia
- If a splenectomy and cholecystectomy are not to be pursued at the time of the cystotomy, ursodiol therapy is recommended, along with serial monitoring (i.e., every 4-6 weeks) of the gall bladder and spleen, to assess for progression of the lesions.
- Given the azotemia, a urine culture and sensitivity and baseline blood pressure measurement are recommended along with serial monitoring of the patient's renal values to assess for progression of the renal disease.





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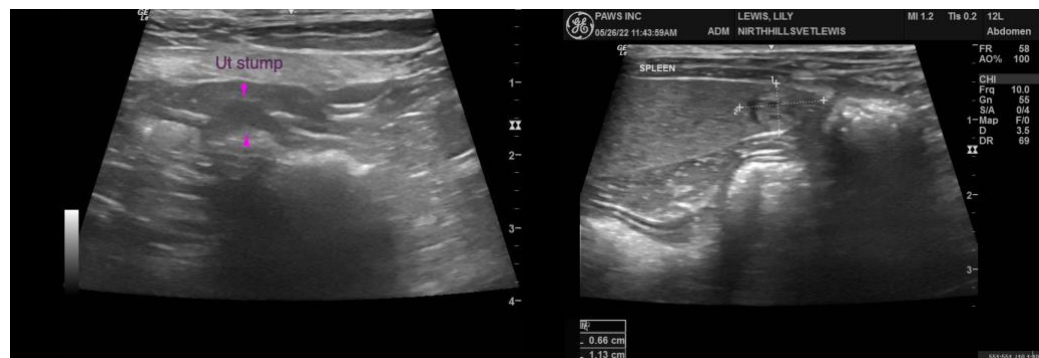
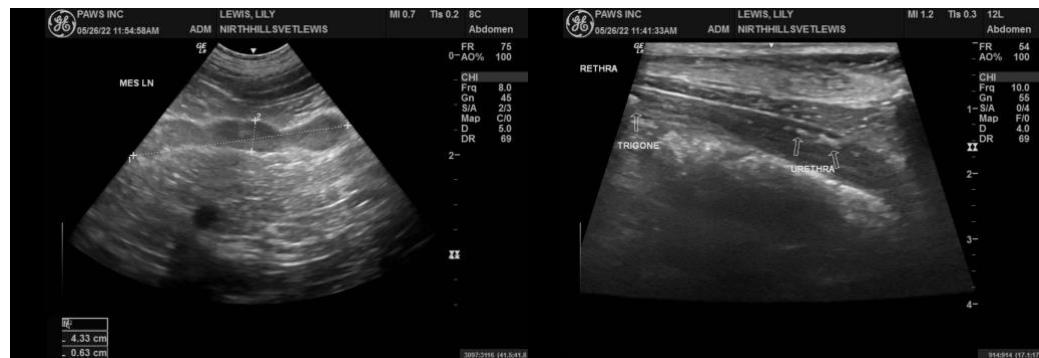
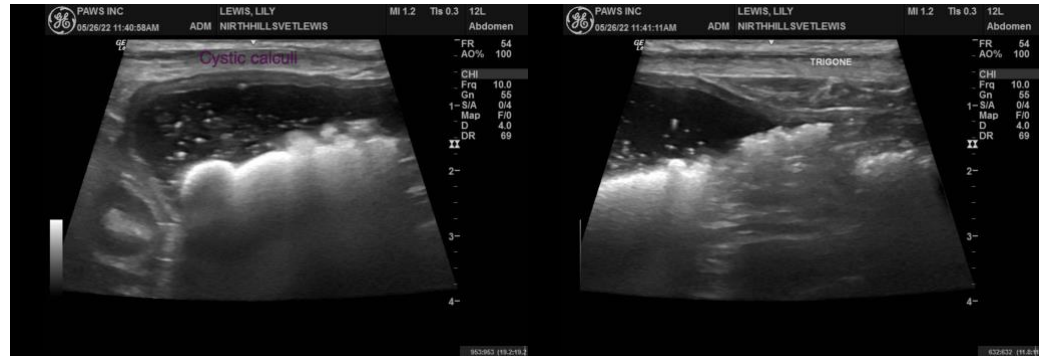
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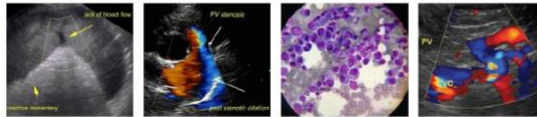
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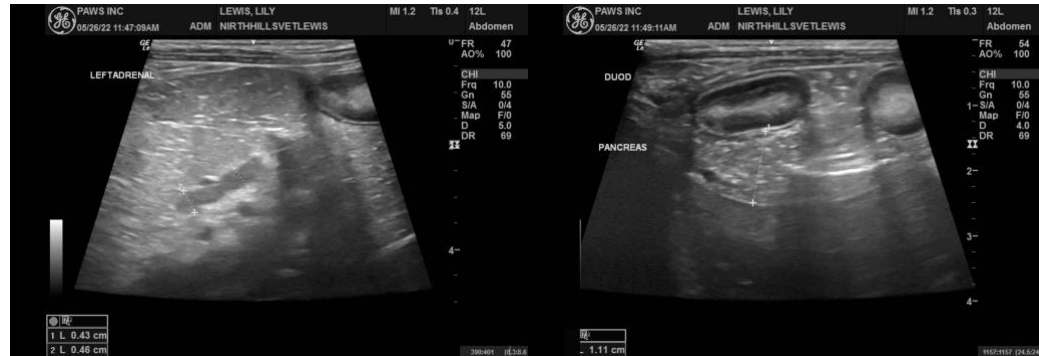
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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