



PATIENT

Cinderella McManus

SPECIES

Canine

BREED

Lhasa Apso

SEX

Spayed Female

AGE

13.7 Years

WEIGHT

18.6 Pounds

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Dr. Tam Mengine

HOSPITAL NAME

Stoney Creek VH

REFERRING VET

Dr. Tam Mengine

INVOICE

38005

DATE

5/26/22

PRESENTING CLINICAL SIGNS

Cystotomy performed 1/22, Ca++Ox stones - pet continues to have recurrent UTIs though stones have not recurred. (E. coli & Enterococcus, not resistant to most antimicrobials). Last bloodwork was 1/22, ALP 583, else unremarkable

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

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. There is a very small pinpoint area of mineralization in the dependent portion of the urinary bladder, consistent with a small amount of sandy debris or a very small stone.

The left kidney has a normal shape and size (4.38 cm) with small non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor 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, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.43 cm) with pinpoint non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor 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, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal/borderline "plump" in size measuring 0.63 cm at the cranial pole, 0.54 cm at the caudal pole, and 2.07 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in shape, particularly at the caudal pole, where there is a dorsal irregularity of approximately 0.32 cm x 0.56 cm. While no overt vascular invasion is visualized, this area of irregularity should continue to be monitored.

The right adrenal gland is normal/borderline "plump" in size measuring 0.74 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 heterogenous in echotexture with subtle, indistinct focal mottling. 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 moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.



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Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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 relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measured 0.42 cm. Jejunum wall measured 0.28 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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 normal and isoechoic to surrounding 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

- Borderline bilateral adrenomegaly with an irregular caudal pole of the left adrenal gland – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended. Continued monitoring of the caudal pole of the left adrenal gland is warranted to look for development of an early mass lesion/vascular invasion.
- Decreased corticomedullary distinction in both kidneys with small, non-obstructive nephroliths – The bilateral renal findings are consistent with age-related change.
- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- Moderate gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Both of the adrenal glands are somewhat “plump” in appearance. The left adrenal gland in articular has an irregularity at the caudal pole. This is in the area of the vasculature, and continued monitoring (recheck ultrasound in 4-6 weeks) is warranted to make sure there is not early vascular invasion, etc. If signs of Cushing’s are present, then consider adrenal function testing, as the adrenals in combination



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with the appearance of the liver and elevation in ALP could constitute early Cushing's disease and possibly a complicating factor of the recurrent urinary tract infections(?).

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Both kidneys have small nephroliths and reduced corticomedullary distinction, consistent with age related change.

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There is some echogenic debris within the gallbladder. This should continue to be monitored. If it appears to be progressing, consider starting Ursodiol therapy.

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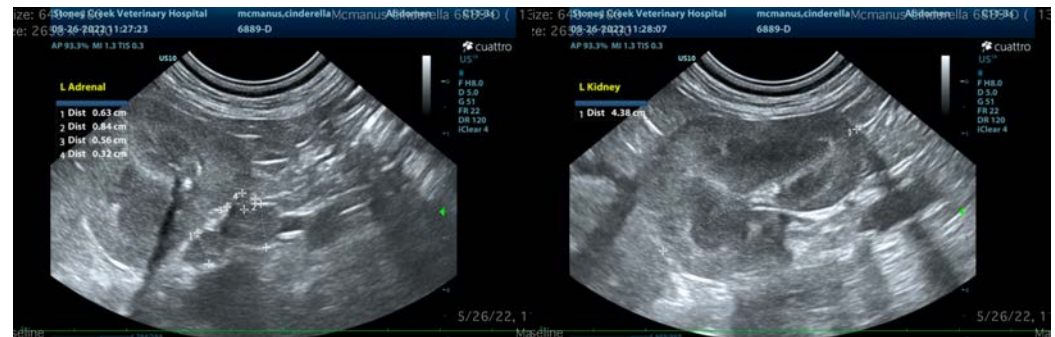
An obvious cause for the recurrent urinary tract infections is not observed, although your search for possible endocrine disease is a good thought. Additionally, with previous surgical sites, there is the possibility of scar tissue, suture material, etc. potentially acting as a nidus. If these persist, you could consider cystoscopy to further evaluate the urethra and urinary bladder.

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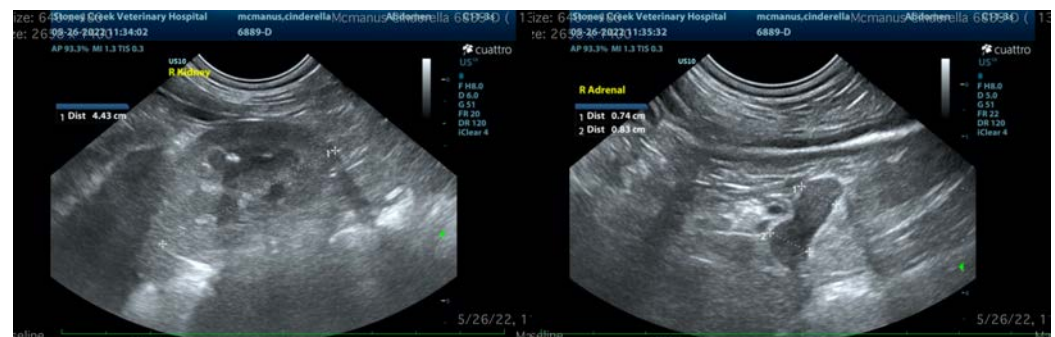
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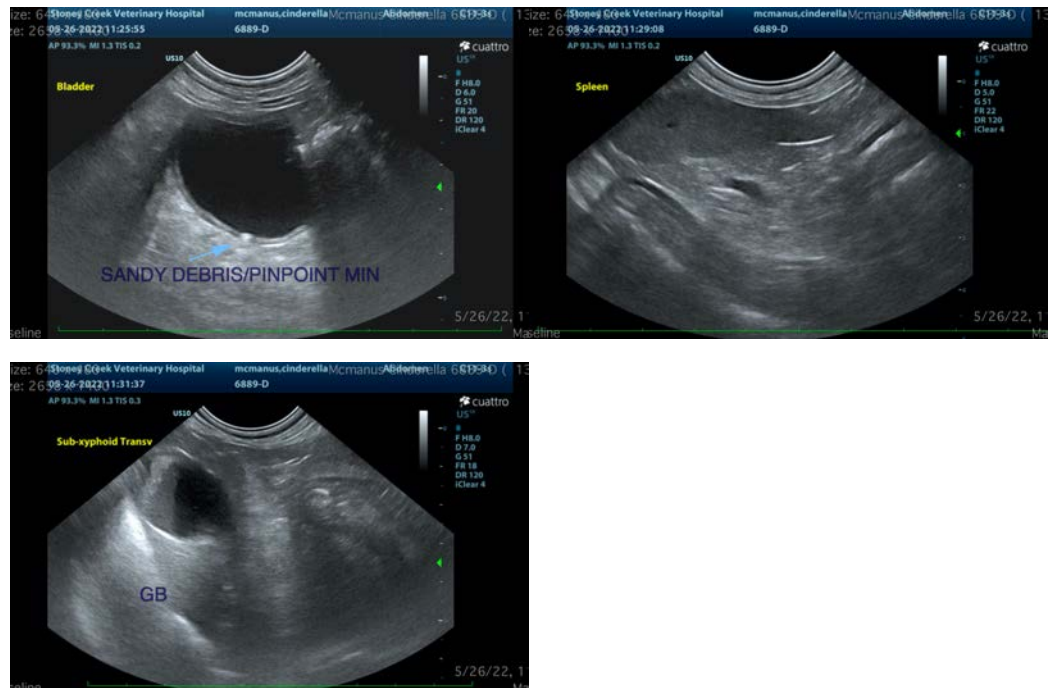
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com