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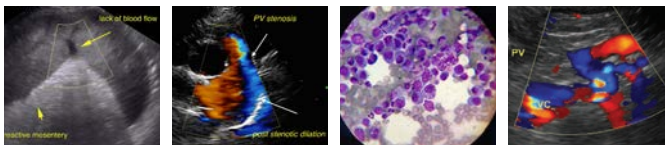


PATIENT

Coconut Cassels-Conway

SPECIES

Canine

BREED

West Highland Terrier

SEX

Spayed Female

AGE

14 Years

WEIGHT

16 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Megan Cassels-Conway

HOSPITAL NAME

Central Broward AH

REFERRING VET

Dr. Megan Cassels-Conway

INVOICE

38719

DATE

6/15/22

PRESENTING CLINICAL SIGNS

Presented for annual exam. Rare episode of incontinence while sleeping once every few months past year. Large cyst or dilated pelvis in left kidney noted on US when obtaining cysto. Thoracic rads wnl. Abdominal rads showed severely enlarged irregular left kidney. Mild azotemia, severe pyuria and bacteriuria. History of apocrine duct carcinoma completely excised from mandibular lip 7/2021. Abnormal PE/Chem/CBC/UA Results: 6/14/22 CBC: Thrombocytosis 502 Chem: BUN 35, Creat 1.5, TG 440 (not fasted) UA via cysto: 1.020, 1+ protein, 3+ blood, wbc 21-50, rods>100 C/S pending Accuplex: Negative

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is minimally distended with anechoic urine. The Bladder wall appears diffusely irregular and mildly thickened, measuring 0.41 cm. In the sagittal views, the area of the trigone appears relatively free of any mass effects or calculi, although the area of the ureteral papillae is somewhat obscured in some views by shadowing colon. Lack of urine distention impairs the ability to fully evaluate these structures. Correlate with radiographs looking for stones/mineralizations.

The left kidney is large, measuring 6.3 cm. It is rounded in shape. Overall echogenicity is normal. There is a very large anechoic fluid-filles structure visualized within the left kidney. This has the appearance of a severely dilated renal pelvis, measuring 5.0 cm x 3.9 cm in the sagittal view, and 4.55 cm x 3.05 cm in the cross sectional view. There is no evidence of perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature appears relatively normal. Although the appearance of this lesion is most consistent with a hydronephrotic kidney, there is no evidence of a dilated ureter, so an atypical cystic structure could be considered.

The right kidney has a normal shape and size (4.17 cm) with pyelectasia at 0.47 cm. 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 nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.47 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.

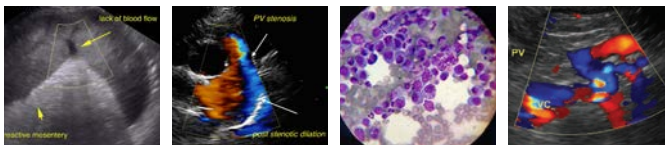
The right adrenal gland is normal in size measuring 0.24 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

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.



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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.=

Gastrointestinal

The stomach is dilated with a large amount of fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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

- Suspect hydronephrotic left kidney – An alternate differential would be an atypical renal cyst. No source of an obstruction or evidence of hydroureter is visualized.
- Decreased corticomedullary distinction in the right kidney with pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the left/right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Irregular, subjectively thickened urinary bladder wall – Lack of urine distention makes evaluation of the urinary bladder difficult, particularly the trigone region. Recommend urinalysis and culture.
- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Large shadowing material within the gastric lumen – Correlate with feedings history and abdominal radiographs. If adequately fasted then consider such differentials as delayed gastric emptying or a partial outflow tract obstruction (none visualized).

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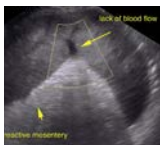
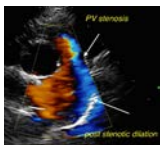
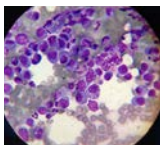
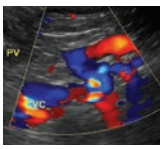

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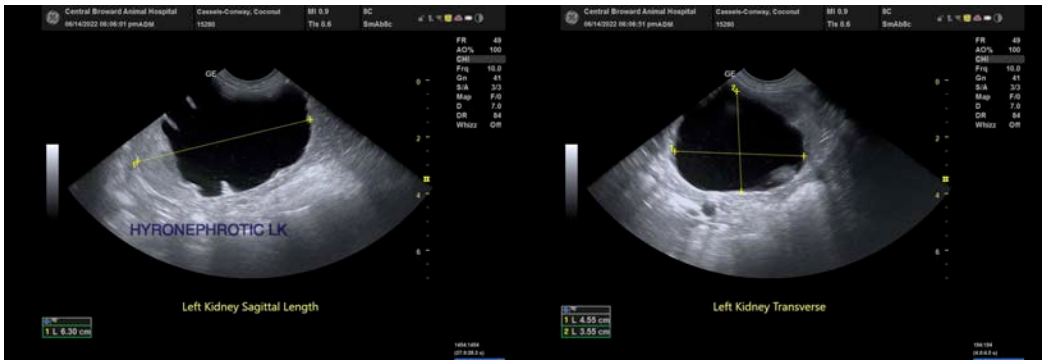
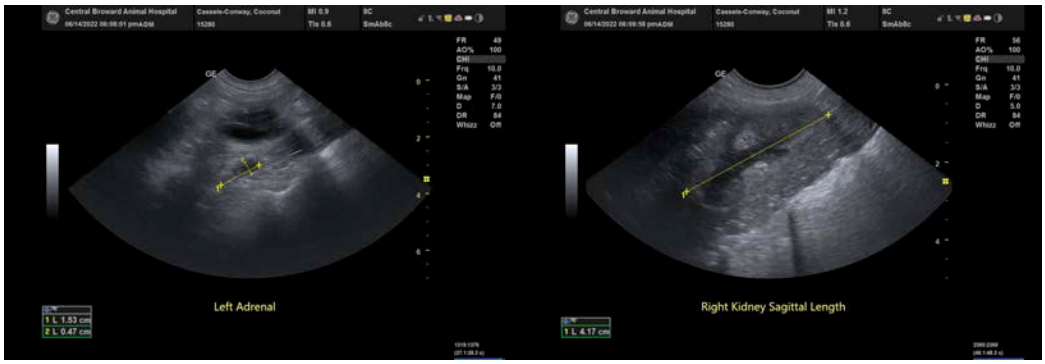
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large, fluid-filled anechoic structure within the left kidney. The appearance of this lesion is most consistent with a hydronephrotic kidney, but I am unable to visualize a ureter or a source of the obstruction. Therefore, an atypical cystic structure is possible. Additionally, it is difficult to fully evaluate the urinary bladder for an obstruction at the level of the ureteral papillae, due to lack of urine distention and urinary bladder irregularity. The diffuse thickening and irregularity have an appearance most consistent with cystitis. Additionally, the right kidney has pyelectasia and decreased corticomedullary distinction.

I suspect there could be cystitis and pyelonephritis present. It is possible that imaging the bladder will be easier once antibiotic therapy is initiated and the pet is not so pollakiuric. Alternately, you could consider advanced imaging (contrast CT scan) to further evaluate the urinary bladder and kidney, or an IVP with radiographs, provided the patient is well hydrated prior to administering the dye. If there is an infection present, then consider a urine protein to creatinine ratio once the infection has cleared. Additionally, consider a blood pressure evaluation. Re-imaging of the left kidney with ultrasound can also be performed to look for progressive dilation of the kidney (recheck in 2-4 days?).





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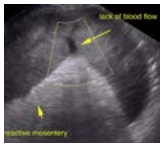
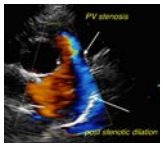
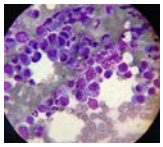
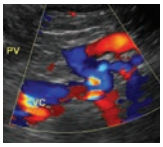

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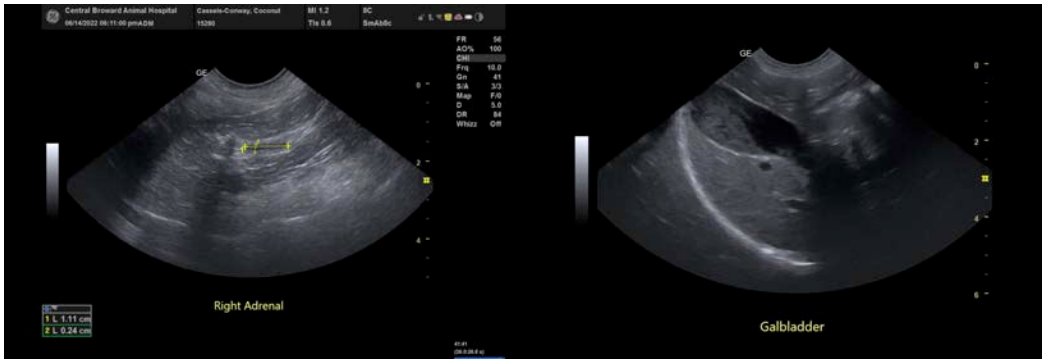

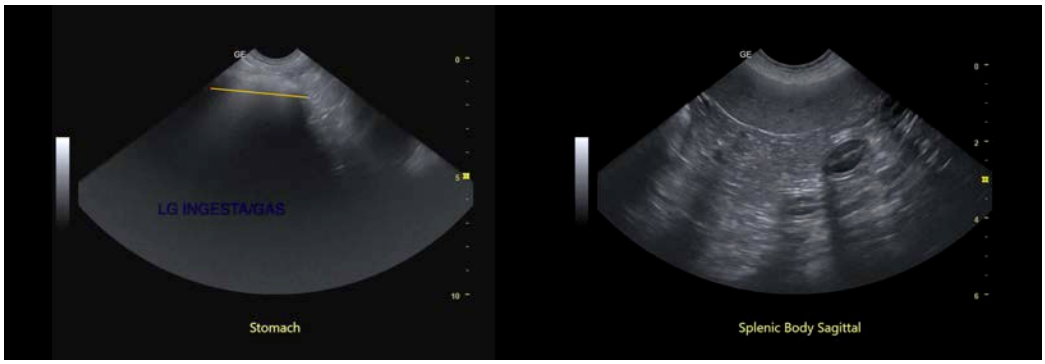

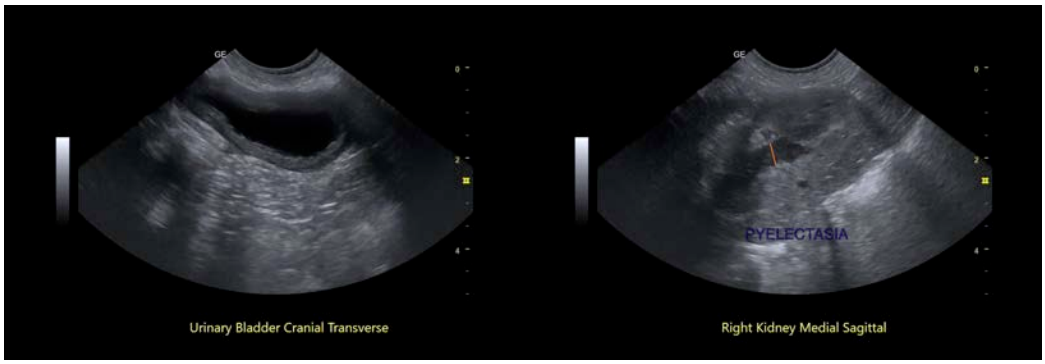

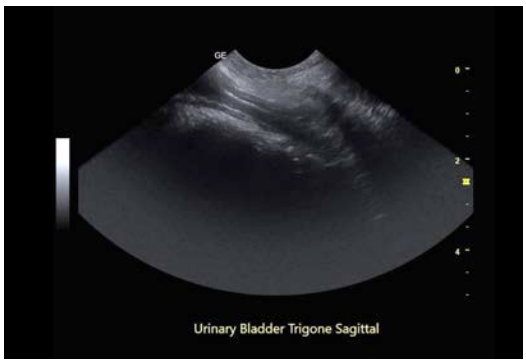

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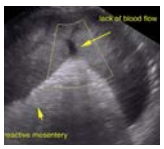
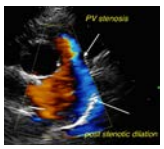
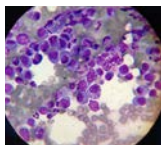
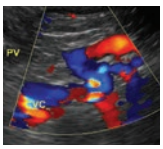

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com