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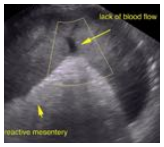

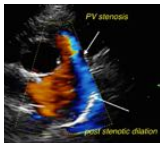

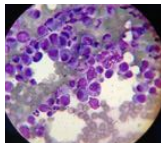
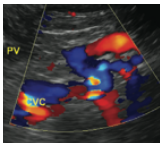

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1-800-838-4268 info@sonopath.com

PATIENT
Alice Voris

SPECIES
Canine

BREED
Boxer

SEX
Female

AGE
12 months

WEIGHT
45.6 lbs

INTERPRETED BY
Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY
Carissa Rhoades

HOSPITAL NAME
Elizabeth AH

REFERRING VET
Dr. Aylln

INVOICE
42784

DATE
2/14/23

PRESENTING CLINICAL SIGNS

History: Did some blood work and the kidney values were high the doctors are pretty worried about the values.
Abnormal PE/Chem/CBC/UA Results: PE: Healthy and normal UA: Specific Gravity 1.019 pH: 6.5 Images were not clear She does have a UTI CBC: Lymphocytes 1.003K/uL CHEM: IDEXX SDMA 30 ug/dL Creatinine 2.4 mg/dL BUN 66mg.dL Phosphorus 6.8mg/dL AST 64 U/L Amylase 10,193 U/L Lipase >1,800 U/L Creatine Kinase 295 U/L Spec cPL 2,000 ug/L Heartworm Antigen Negative Ehrlichia canis / ewingii Negative Lyme (Borrelia burgdorferi) Negative Anaplasma phagocytophilum / platys Negative

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder lumen volume is small and walls are diffusely thickened most consistent with pseudohypertrophy.

The left kidney has an irregular capsule and with nearly complete lack of corticomedullary definition and heterogeneous to marbled echotexture. Left renal pelvis is moderately dilated measuring 0.39 cm. Ureter is non-dilated. The right kidney was not definitively visualized. The left kidney measured 4.61 cm.

Adrenal Glands

Left adrenal gland was visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 1.86 cm in length x 0.55 cm at the caudal pole and 0.5 cm at the cranial pole. The right adrenal gland was not definitively visualized.

Spleen

The spleen was normal with a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

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. Gallbladder is moderately distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally

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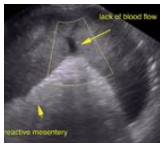
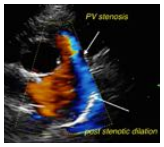
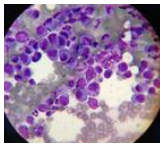
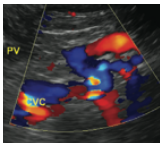

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Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of 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. 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 base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

Lymph Nodes

Mesenteric lymph nodes are prominent with normal echogenicity and maintenance of normal width to length ratio

Free Abdomen

No masses or free fluid were noted.

Heart

The right auricle and pericardium were unremarkable. No obvious pathology. If cardiac function evaluation is desired a full echocardiogram is warranted.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

1. Dystrophic left kidney, right kidney not visualized
2. Normal pancreas
3. Mesenteric lymphadenopathy, consistent with age
4. Thickened urinary bladder wall - suspect pseudohypertrophy

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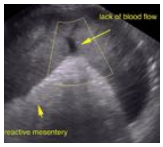
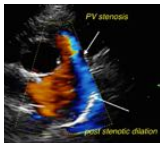
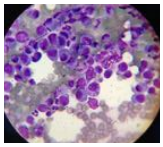
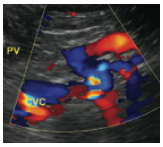

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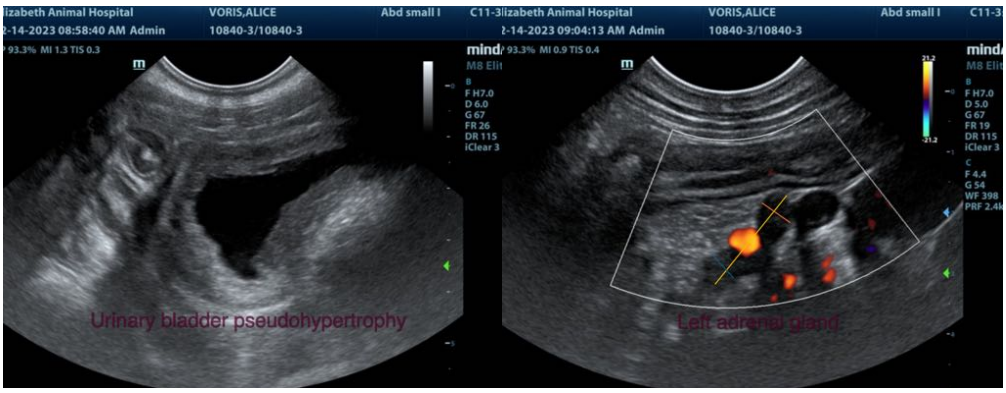
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The appearance of the left kidney is highly irregular given the patient's age and is very concerning for congenital renal dysplasia. Previous renal insult and chronic degenerative changes secondary to early insult with renal toxin, infection (leptospirosis, other bacterial, fungal, other) or thromboembolic disease are also possibilities, though less likely given the patients young age. Screening for hypoadrenocorticism, though not strongly suspected, is strongly recommended to ensure this treatable disease is not missed. Testing for infectious disease (leptospirosis, urine culture) is strongly recommended.

Ultimately renal biopsy is required for definitive diagnosis of renal dysplasia. Management is similar to management of any chronic renal dysfunction and includes renal specific diet (protein and phosphorus limited), encouraging water intake, management of proteinuria and hypertension with ACE-inhibitor with addition of more anti-hypertensives as required and monitoring for development of anemia.

Decreased GFR associated with renal dysplasia is the likely explanation for the severely elevated amylase and PLi as the pancreas appeared sonographically normal. Pancreatitis cannot be definitively ruled out despite normal ultrasonographic appearance, but renal dysfunction causing value elevations is a more likely explanation.
Lymphadenopathy with maintenance of normal structure is common in young dogs and is likely a normal variant consistent with age. Infectious lymphadenitis (bacterial, viral, protozoal or less likely fungal infection), reactive lymphadenitis (parasitism, migrating foreign body), or less likely infiltrative disease (lymphoma, MCT, other) among other things cannot be definitively excluded. Lymph node aspirate and culture could be considered to further define this change if clinically warranted. Serial imaging to monitor for progression or resolution of lymphadenopathy is recommended.

Urinary bladder wall thickening is likely pseudohypertrophy secondary to low volume of urine and lack of luminal distension, however, true mural thickening cannot be definitively ruled out. Re-examination when urinary bladder lumen volume is increased with time and/or fluid therapy should be considered if clinical suspicion for urinary bladder disease is high.



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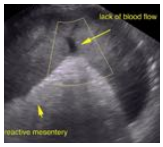
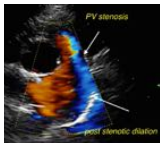
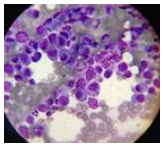
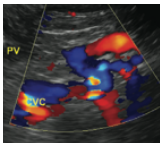

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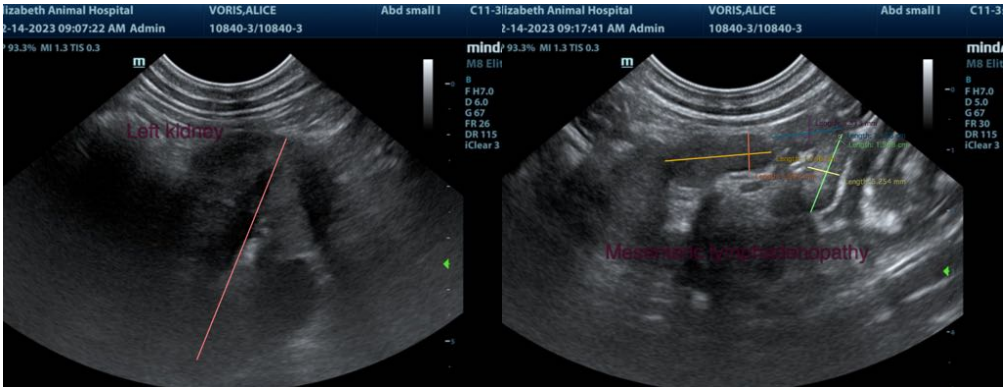

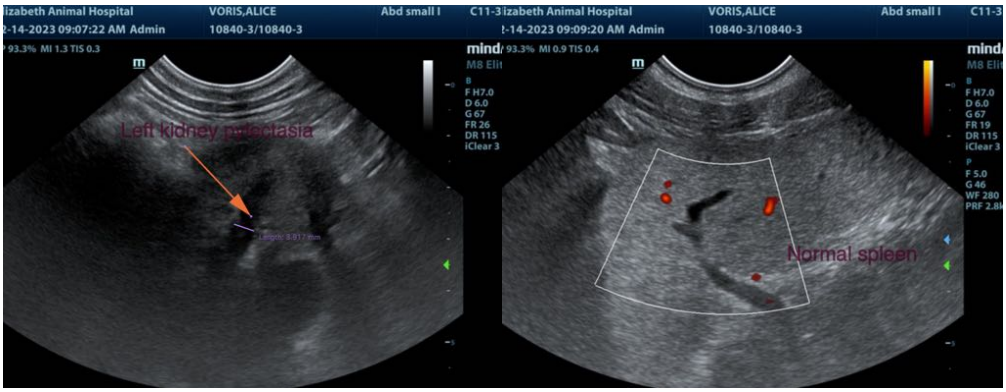

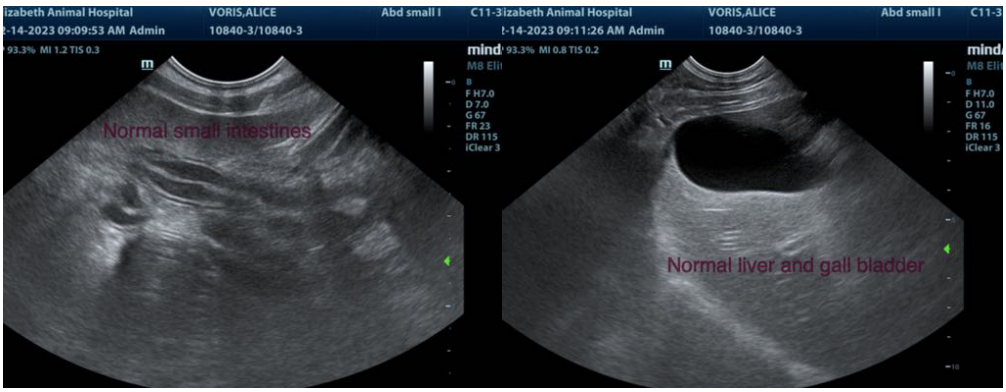

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Dr Brittany Sinclair, BVSc(hons), DACVECC
info@SonoPath.com