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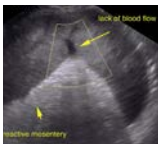
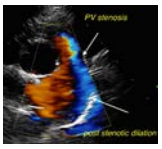
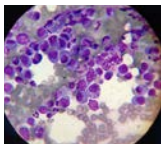
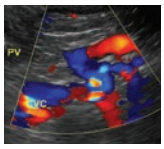

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1-800-838-4268 info@sonopath.com

PATIENT

Buddy Francisco

SPECIES

Canine

BREED

Smooth-Coat Chihuahua

SEX

Neutered Male

AGE

9 Years 10 Months

WEIGHT

6.2 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Leal

HOSPITAL NAME

Blairstown AH

REFERRING VET

Dr. Lovell

INVOICE

26128

DATE

10/6/21

PRESENTING CLINICAL SIGNS

Dog presented several days of not eating or drinking. Lethargy and weight loss noted. Not currently on medications. Grade 3 dental disease. Ultrasound done for further evaluation of kidneys
Abnormal PE/Chem/CBC/UA Results: Bloodwork shows CBC all WNL. BUN (>130), P(>16), Creatinine (high), Amylase (>2500), Lipase (5536), Lyme combo all negative. UA shows specific gravity 1.010

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, masses or cystic calculi.

The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (3.0). 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. Small non-obstructive nephroliths were present. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.9 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. Small non-obstructive nephroliths were present. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.38 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 0.46 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 hypoechoic 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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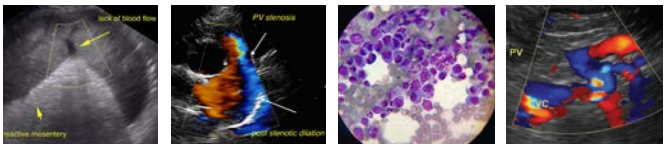

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Gastrointestinal

The stomach is moderately dilated with 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.

PRIMARY FINDINGS

- Decreased corticomedullary distinction in both kidneys with non-obstructive nephroliths – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths.

- Subjectively heterogeneous, hypoechoic 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.

SECONDARY FINDINGS

- Mild amount of ingesta within the gastric lumen – consistent with previous meal. If the patient was adequately fasted, then possible differentials would be delayed gastric emptying or a partial gastric obstruction (none observed).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The kidney changes observed are consistent with the elevated renal values reported. Unfortunately, these are non-specific and can be seen with interstitial fibrosis, infection, inflammation/autoimmune disease, toxicities, and neoplastic causes. The cause of the kidney disease cannot be definitively diagnosed by ultrasound alone. Consider:

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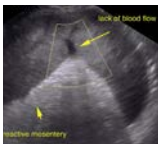
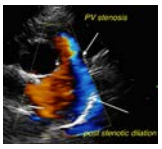
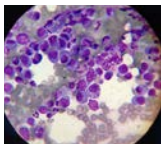
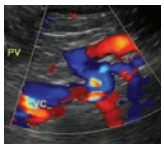

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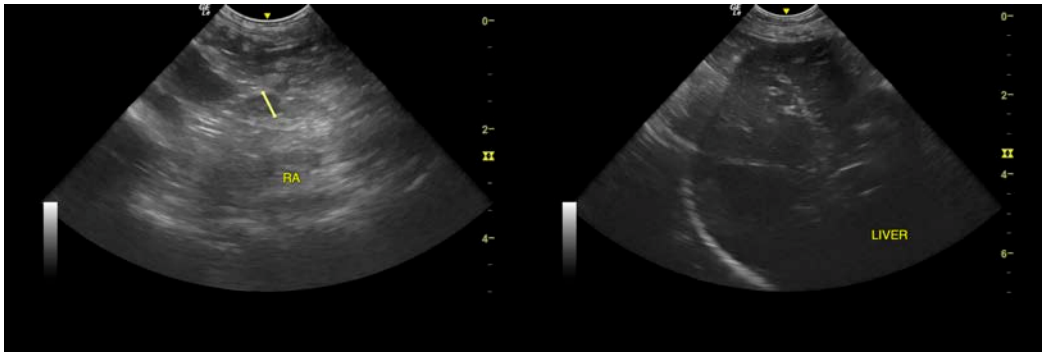
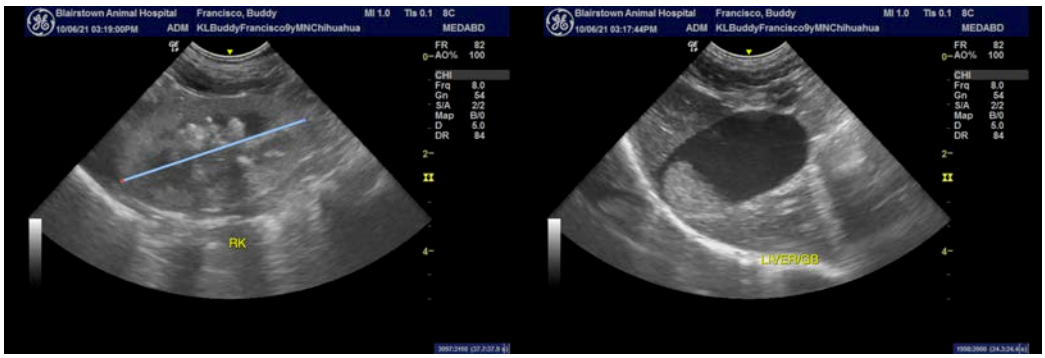
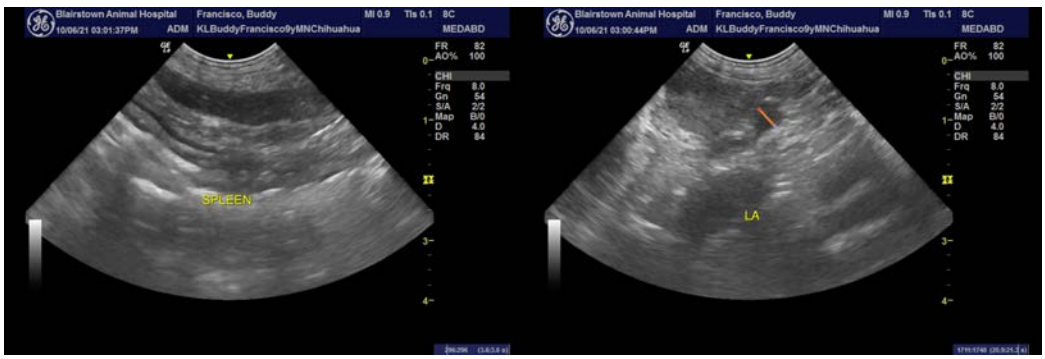
- Close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc.
- Urinalysis/culture to look for underlying infection
- Blood pressure evaluation
- Urine protein:creatinine ratio to look for proteinuria
- PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- FNA likely recommended only if other supportive evidence of neoplasia is present (lymphadenomegally, paraneoplastic hypercalcemia etc..)(normal coags, BP, 25g needle). This is unlikely to be necessary.
- Consider diuresis and symptomatic therapy for GI signs, anorexia etc.

The liver appears somewhat hypoechoic and heterogeneous. If liver values are normal, this is likely normal for this patient. if liver values are elevated, then consider a liver function test and a fine needle aspirate of the liver.







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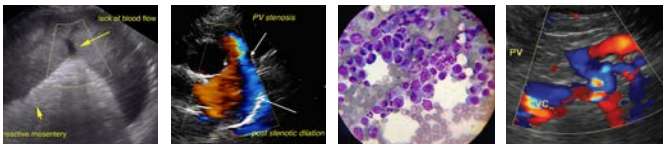

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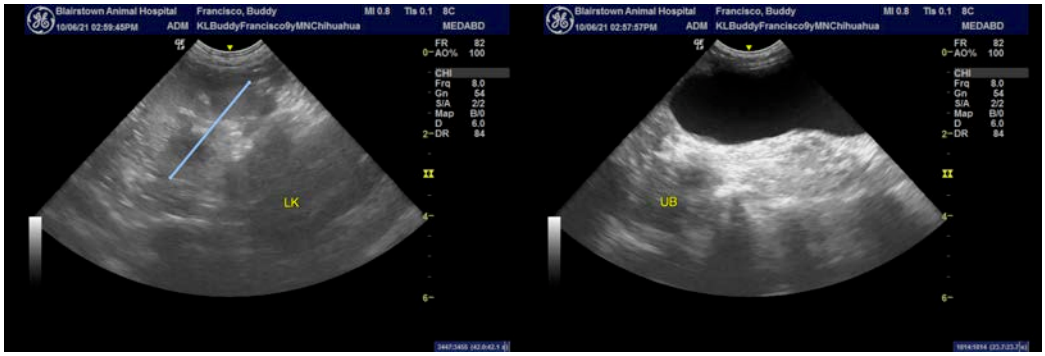

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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