SonoPath
Clinical Sonography & Telecytology
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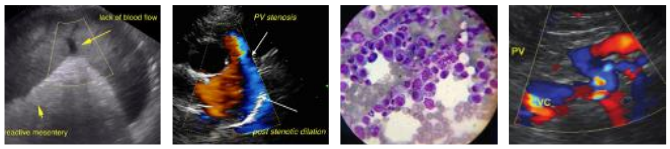


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Dakota Berg

SPECIES

Canine

BREED

Shar Pei

SEX

Spayed Female

AGE

8 Years

WEIGHT

44 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional VH

REFERRING VET

Dr. George Cattiny

INVOICE

21484

DATE

3/6/23

PRESENTING CLINICAL SIGNS

History: Patient presents for renal failure. Current treatments: in-hosp IVFs, famotadine, ondansetron, unasyn, azodyl, epikatin.

Abnormal PE/Chem/CBC/UA Results: BUN/Creat. > 1016.800, CO2 11.2, chol. 118.22, chol. 322.24, Ca. 12.75, amylase 2582, creat. 12.0, uric acid < 10.00, lipase 249, AlP. 419, CK 231, GGT 28, BUN > 126.45, Phos. > 18.60, Bile acid 12.07, AST 100, ALT 182, RDW 47.3.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The left kidney is uniformly enlarged/swollen (4.9 cm) with an overall hyperechoic echogenicity and slight loss of corticomedullary definition. Normal smooth peripheral margination and shape are maintained. The renal pelvis is dilated with anechoic fluid and hyperechoic thickened pelvic fat. No overt evidence of neoplasia is observed. The perinephric area is enhanced by hyperechoic fat and mesentery. The pyelectasia measures 0.44 cm in the sagittal view. A nonobstructive nephrolith is present, measuring 0.34 cm in size.

The right kidney is normal in size and contour. A relatively uniform hyperechogenicity is observed with mildly decreased corticomedullary distinction. There is no pyelectasia noted and no mineral is observed. No overt masses/nodules are observed. The right kidney measures 5.27 cm long.

Adrenal Glands

Left adrenal gland is normal in size (1.67 cm long x 0.42 cm at cranial pole and 0.62 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (1.99 cm long x 0.5 cm at cranial pole and 0.7 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

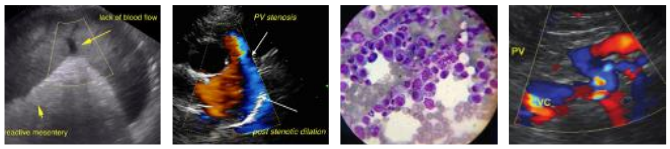
Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic, however, there is a 1.8 cm shadowing cholecystolith noted without evidence of obstruction, however, there is a scant amount of anechoic free fluid adjacent to the gallbladder. There is no evidence of cystic or common bile duct dilation.



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Gastrointestinal

The visible stomach wall is diffusely thick, measuring 1.1 cm thick with a subtly hypoechoic appearance and some subtle loss of mural detail.

The proximal small bowel is also diffusely thick, measuring 0.5-0.6 cm thick with layering noted but subtle early loss of mural detail. The remaining small intestine is normal in wall thickness and layering. The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no appreciable lymphadenopathy. There is a scant amount of anechoic free fluid adjacent to the gallbladder, as well as enhanced hyperechoic mesenteric fat around the left kidney and the stomach and proximal small bowel.

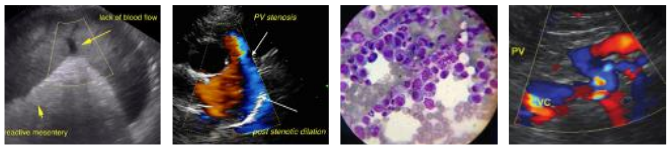
ULTRASONOGRAPHIC FINDINGS

- Diffusely thick stomach and proximal small bowel with some subtle loss of mural detail and changes consistent with a focal peritonitis surrounding the area. This could represent a benign inflammatory change secondary to uremic gastritis vs other, infectious, parasitic, inflammatory disease, etc. However, infiltrative neoplasia can't be ruled out.
- Nephritis with pyelonephritis suspected in the left kidney – This appearance can be consistent with chronic interstitial nephritis or glomerulonephritis. Toxic insult and/or infectious disease (pyelonephritis, Leptospirosis, etc.) cannot be ruled out. This finding should be interpreted in combination with suspicion for renal disease and/or supporting laboratory or urinalysis changes. Regarding the pyelonephritis in the left kidney, these changes are most consistent with chronic pyelonephritis. Chronic scarring and fibrosis and/or chronic nephrolith passage can also result in these pelvic dilation changes. Early infiltrative disease cannot be ruled out but is considered less likely. Additionally, there is a nonobstructive nephrolith in the left kidney.
- A cholecystolith is noted with some inflammatory change suggested around the gallbladder but no evidence of obstruction.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

To more definitively help determine prerenal vs renal component to this patient reported azotemia, Urinalysis and, if indicated based on urinalysis results, urine culture is recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended. Additionally, especially if the azotemia is primarily renal, testing for Leptospirosis could be considered. A blood pressure is also recommended, if not recently evaluated.

A fine needle aspirate of the gastric wall could be considered if patients coagulation status is



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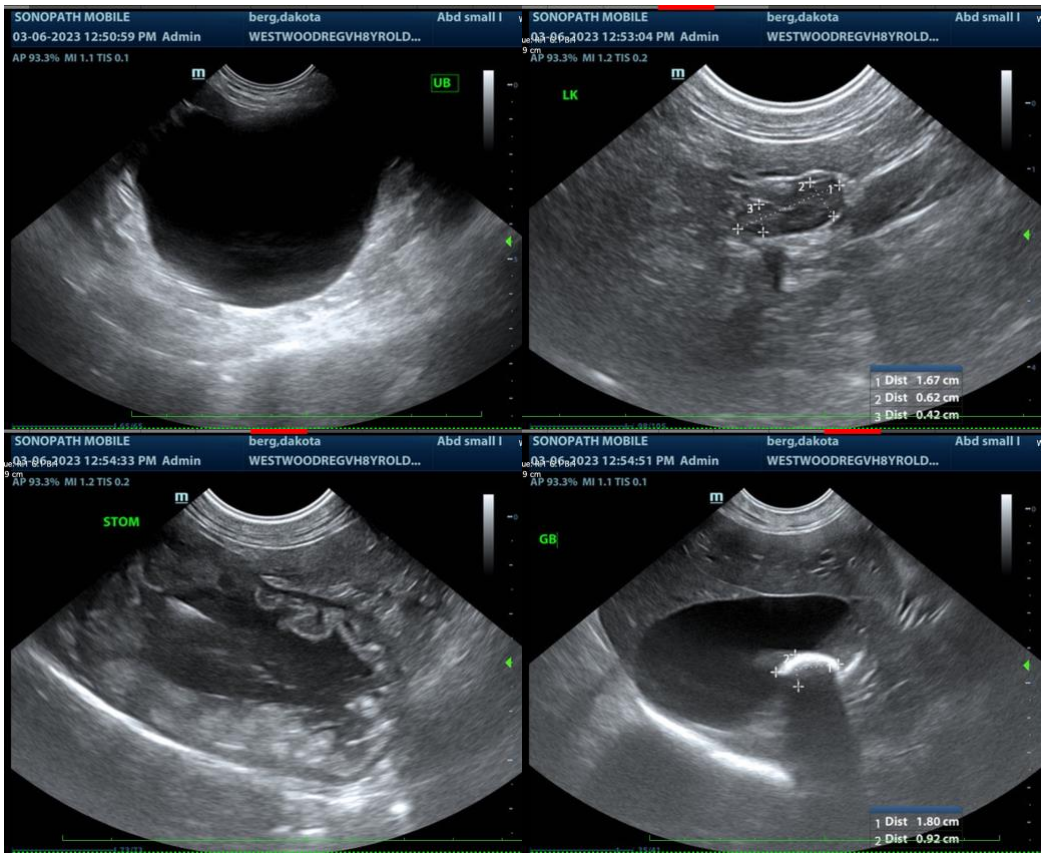
appropriate. Alternatively, continued supportive/symptomatic medical management of the azotemia and clinical signs with antiemetics, gastroprotectants, fluid therapy, broad spectrum antibiotics, empirical deworming with a 5-day course of Panacur, etc., could be continued with recheck imaging of the stomach once clinical improvement is noted, with more invasive diagnostics considered only if the change remains at that time. Regardless, however, in the meantime, A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function. A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

If gastrointestinal signs persist, gastric wall changes persist, and a diagnosis cannot be obtained cytologically, upper GI endoscopy for further evaluation of the stomach and duodenum, as well as biopsies may be necessary.



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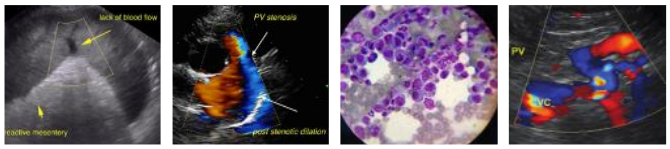

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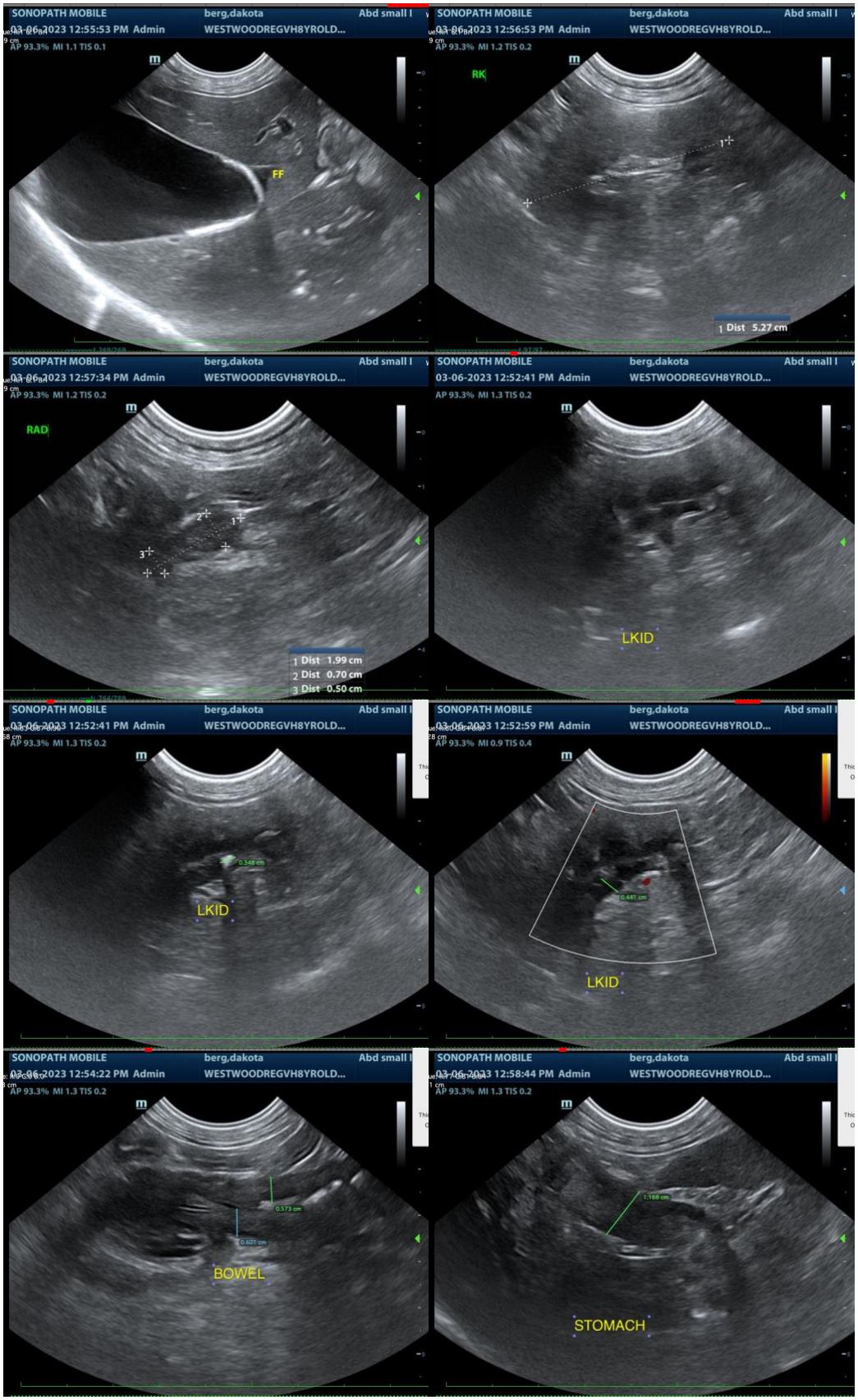

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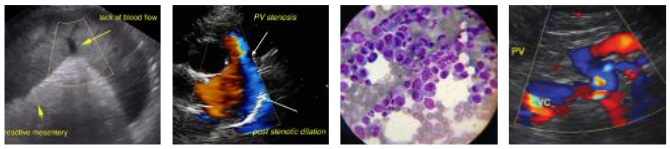

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM DACVIM

Beth.Johnson@SonoPath.com