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Clinical Sonography & Telecytology
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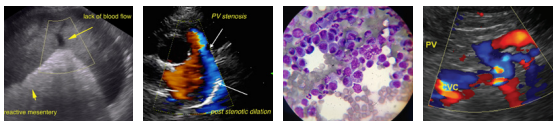

ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Rudy Radke

SPECIES

Canine

BREED

Yorkie X

SEX

Neutered Male

AGE

13 Years

WEIGHT

10.4 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Ark Animal Hospital

REFERRING VET

Dr. Jackson

INVOICE

35742

DATE

2/18/22

PRESENTING CLINICAL SIGNS

Previous history of cholecystolithiasis found on radiographs and IVDD at L1-L2 on 9/21. Started inappropriate urination and defecation in December, fecal and UA clear (UA had proteinuria and few RBCs). Still having accidents in the house so full BW done in 1/18/22. Multiple liver enzyme elevations, rods found in UA sample, BP 205/113/141. Does have previous history of pancreatitis but usually vomits when this happens, O hasn't seen vomiting in long time. Started on cefpodoxime, did well but signs returned and UA repeated showed same RBCs, proteinuria, low USG. Cultured on 2/10, no growth. Signs persisting, recommended AUS vs referral.
Abnormal PE/Chem/CBC/UA Results: Current Medications interceptor and credelio

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended. It has a normal uniform wall thickness of <0.2 cm, except along the dependent wall, where this a 1.5 cm wide x 1.1 cm deep echogenic density that is difficult to tell whether it is part of the wall or sludge/mucus up against the wall. Contents include primarily anechoic fluid combined with both gravity dependent and suspended echogenic non-shadowing debris within the fluid. Small mineral debris cannot be definitively ruled out.

The area of the prostate is evaluated without evident prostatic pathology. However, a measurement is unable to be obtained due to artifact from the colon.

The kidneys are bilaterally small, irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. There is no pyelectasia noted and no mineral is observed. The left kidney measures 3.73 cm. The right kidney measures 3.75 cm.

Adrenal Glands

The left adrenal gland is enlarged in size (1.92 cm long x 0.86 cm at the cranial pole and 0.67 cm at the caudal pole). Normal shape and contour are maintained. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The right adrenal gland is enlarged in size (1.8 cm long x 1.24 cm at the cranial pole and 0.58 cm at the caudal pole). Normal shape and contour are maintained. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively enlarged in size with rounded margins but intact capsule. Parenchyma is homogenously coarse/mottled in echotexture and normal to hypoechoic in echogenicity. No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged. Margins are smooth but round. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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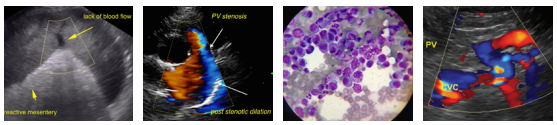

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GB is moderately distended with anechoic bile and gravity dependent echogenic sediment. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation. There is a cholelith present.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). 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 (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

- Hyperechoic hepatomegaly canine – most consistent with benign steroid (endocrine) hepatopathy or reactive or idiopathic hepatopathy. Infiltrative neoplasia such as round cell neoplasia is also possible, but considered less likely.
- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- Urinary bladder sediment – Urine changes are most consistent with cellular debris or crystalluria. Small mineral foci without discrete shadowing cannot be ruled out, and a focal thickening of the bladder wall can't be ruled out versus sludge, mucus and debris up against the wall.
- Coarse splenomegaly – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.
- Chronic Kidney Disease - This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc.

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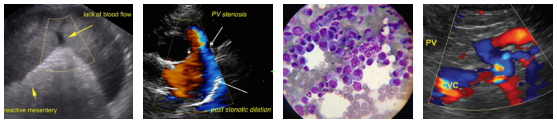

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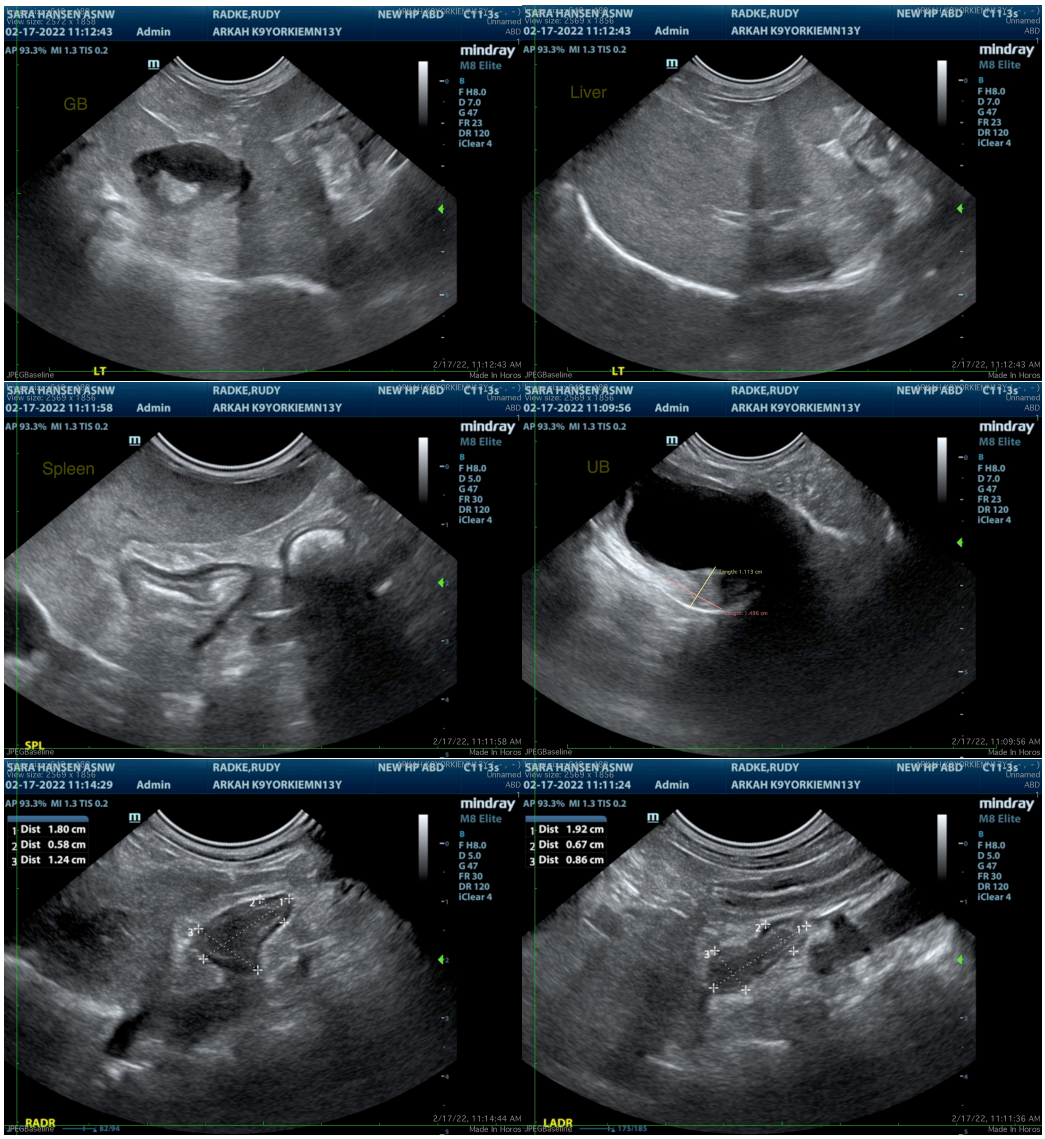
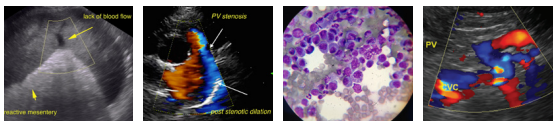
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's history of urinary tract infections, hypertension and bilateral adrenomegaly, recommendations include a low-dose Dexamethasone suppression test to rule out hyperadrenocorticism. If diagnosed, this patient likely has pituitary dependent versus adrenal dependent hyperadrenocorticism based on these images. If the recent urine culture was not at least 7 days following the completion of antibiotics, a false negative could have occurred, and a recheck urine culture a week off of antibiotics is recommended.

A fine needle aspirate of the liver and spleen could be considered if patient's coagulation status is appropriate. Finally, the dependent bladder wall could be re-examined with color flow doppler to help determine whether or not the thickening is tissue versus debris, or the urinary bladder can just be monitored via ultrasound as treatment is put in place for the urinary signs, and/or if presumed hyperadrenocorticism is managed, which may reduce the recurrence of urinary tract infections.





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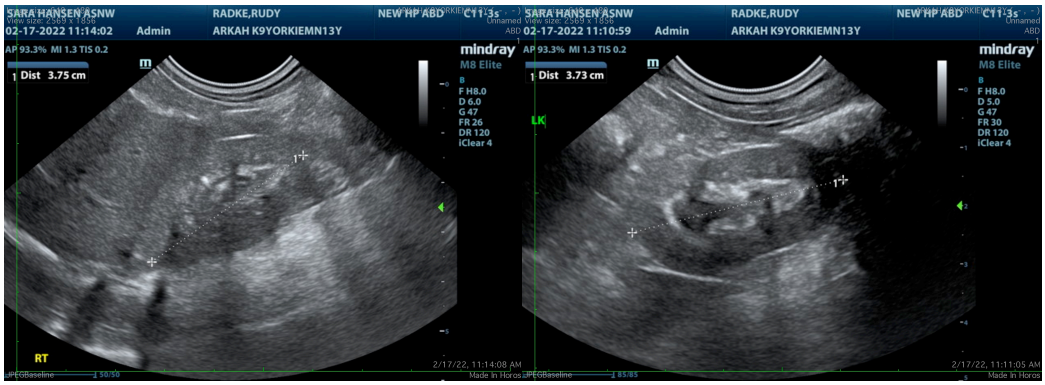

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com