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Clinical Sonography & Telecytology
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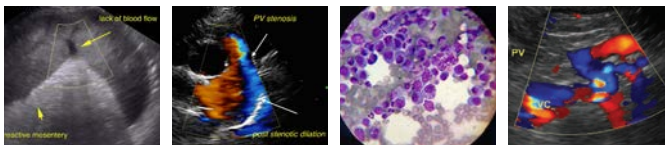

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1-800-838-4268 info@sonopath.com

PATIENT
Bella Russo

SPECIES
Canine

BREED
Yorkshire Terrier

SEX
Spayed Female

AGE
11 Years 3 Months

WEIGHT
7.9 Pounds

INTERPRETED BY
Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Amy Priest

HOSPITAL NAME
Long Valley AH

REFERRING VET
Dr. Russell Earl

INVOICE
42035

DATE
10/13/22

PRESENTING CLINICAL SIGNS

Polyuria reported. Also currently under treatment for a UTI. Currently on Marbofloxacin. Pet also has hx of COPD/Collapsing Trachea and has been on Theophylline.

Abnormal PE/Chem/CBC/UA Results: CBC: WNL Chem: ALP = 226 Lipase = 436 UA: USpG = 1.011 pH = 5.5 Prot = 2+ Bacteria = 4+ (E coli)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. Along the dorsal wall near the trigone, a 0.37 cm long x 0.20 cm deep echogenic density is noted in the area of the ureteral papilla, differentials for which include mucus adhered to the bladder wall versus a benign polyp versus a prominent papilla. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (4.3 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted.

The left kidney is normal in size (3.7 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted.

Adrenal Glands

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The caudal pole of the left adrenal gland is well visualized and measures 1.3 cm. The caudal pole of the right adrenal gland measures 0.60 cm. The cranial poles are not well visualized.

Spleen

Spleen is subjectively large in size with a mildly swollen but smooth capsule. Parenchyma is normal and homogenous in echogenicity and echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. 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 and falciform fat. An approximately 1.0 cm in diameter anechoic cyst is noted in the caudal liver. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

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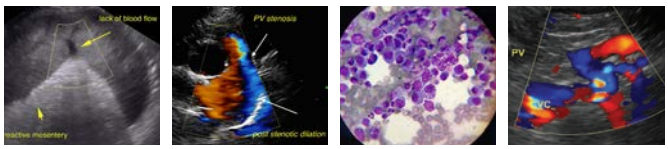

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Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is 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. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is 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 free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Bilateral adrenomegaly –** consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- **Hyperechoic hepatomegaly with a cyst -** This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are 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.
- **Hypersplenism –** 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.

SECONDARY FINDINGS

- **Echogenic density that appears adhered to the dorsal urinary bladder wall in the area of the ureteral papilla** – likely a benign polyp versus adhered mucus or debris.
- Non-obstructive nephrolithiasis bilaterally

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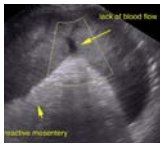
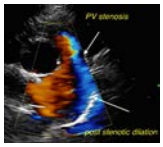
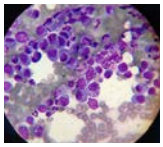
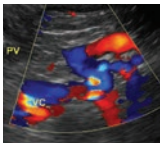

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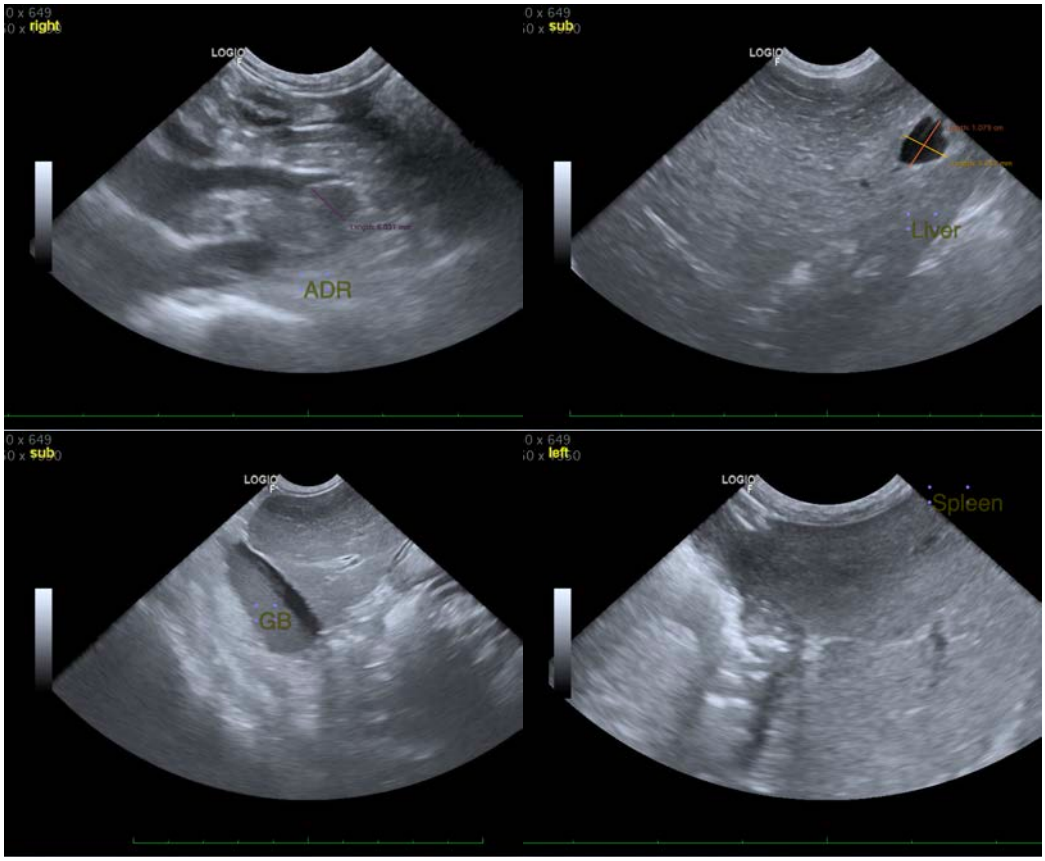
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism. If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc. are present, testing for hyperadrenocorticism with a LDDS test is warranted. If a LDDS test has been evaluated with a normal result, investigation of possible atypical hyperadrenocorticism with a full ACTH stimulation adrenal panel to the University of Tennessee could be considered. If clinicals signs are not present, monitoring is recommended with testing pursued when/if clinical signs develop. If not recently evaluated, blood pressure is recommended.

Prior to testing for hyperadrenocorticism, recommendations are to fully clear the reported urinary tract infection, including obtaining a negative culture a week to 10 days after finishing antibiotics, and only then if clinical signs of polyuria are still present should you pursue further evaluation for possible hyperadrenocorticism.



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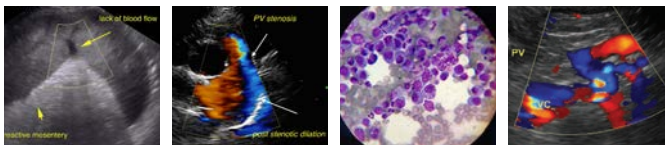

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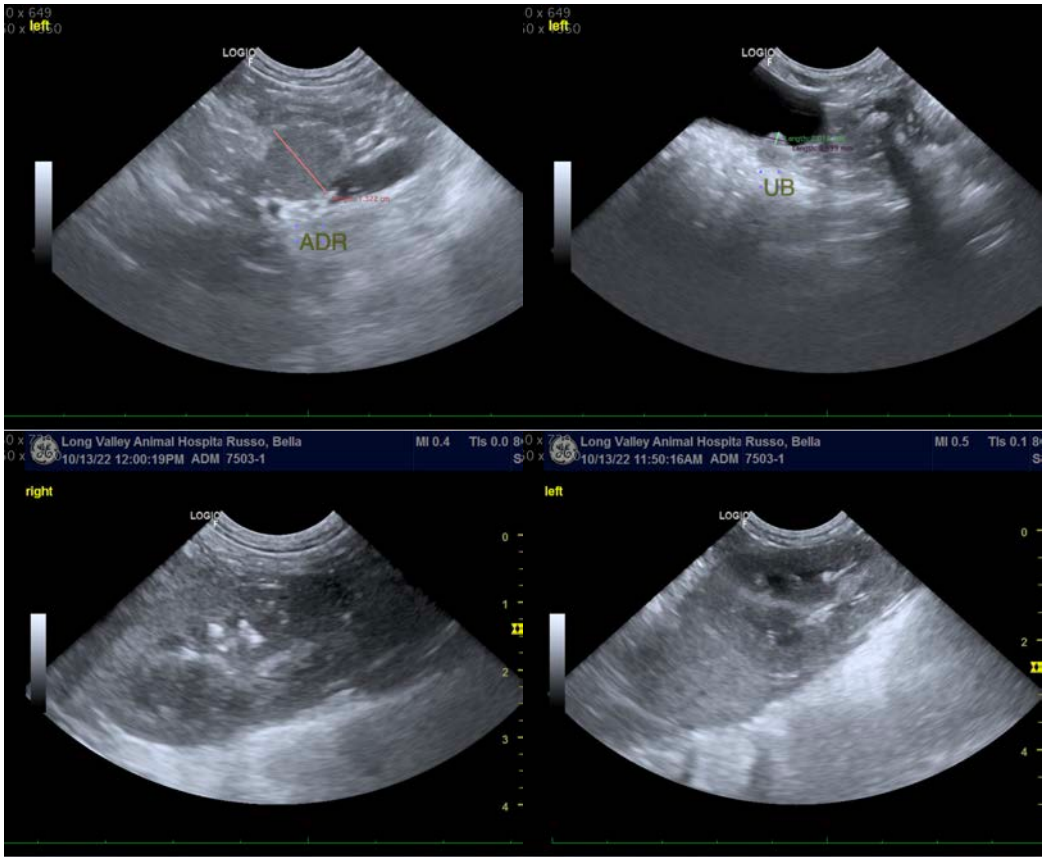

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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