



PATIENT

Linden Sowell

SPECIES

Canine

BREED

Dachshund

SEX

Spayed Female

AGE

9 Years

WEIGHT

15 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Ray Caughman

HOSPITAL NAME

Dogwood AH

REFERRING VET

Ray Caughman

INVOICE

17892

DATE

11/7/22

PRESENTING CLINICAL SIGNS

History: Cushing's patient currently on 15 mg Vetoryl. Patient is still PU/PD and has aggression towards food. Has been treated for multiple UTI's.

Abnormal PE/Chem/CBC/UA Results: Distended abdomen, Mild glucosuria with normal blood glucose. Proteinuria, ALP 581. T4 0.9

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.

Left kidney is normal is size (4.88 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, mineral or infarcts observed.

Right kidney is normal is size (5.07 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, mineral or infarcts observed.

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 left adrenal gland measures 1.44 cm long x 0.61 cm at cranial pole and 0.42 cm at caudal pole. The right adrenal gland measures 2.0 cm long x 0.61 cm at cranial pole and 0.6 cm at caudal pole.

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 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. No focal lesions are observed. 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.

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.



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There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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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 empty with no evidence of obstruction, foreign material or infiltrative disease.

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

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Pancreas

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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.

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There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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Free Abdomen

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

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ULTRASONOGRAPHIC FINDINGS

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- 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– 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.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The ultrasound findings described above are consistent with the reportedly previously diagnosed hyperadrenocorticism, most likely pituitary dependent given the appearance of the adrenal glands. Given this patients reported lack of improvement of polyuria/polydipsia and polyphagia despite viral administration, recommendations include an ACTH stimulation test to assess cortisol levels and control level of current dose of Vetoryl, as this patient may need a higher dose. Additionally, even if cortisol levels are normal and the same daily mg dose of Vetoryl is required, many patients respond much better to the daily dose being divided into a morning and a p.m. dose. So, if this patient is receiving it's entire dose once daily and the dose doesn't need to be changed, it could be divided and given twice per day. Alternatively, this may be a patient that doesn't respond well to Vetoryl and needs a transition to Lysodren/Mitotane, especially if cortisol precursor hormones are increased and contributing to clinical signs, which can be determined by running a full adrenal panel to the University of Tennessee.

Given the concurrent proteinuria and glucosuria, a renal tubular disorder could also be present,



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however, that is considered much less likely and initial recommendations include addressing the hyperadrenocorticism and adjusting management to affect. If glucosuria persists, further evaluation for possible renal tubular disorder could be pursued.

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In the meantime, a blood pressure is recommended if not already evaluated.

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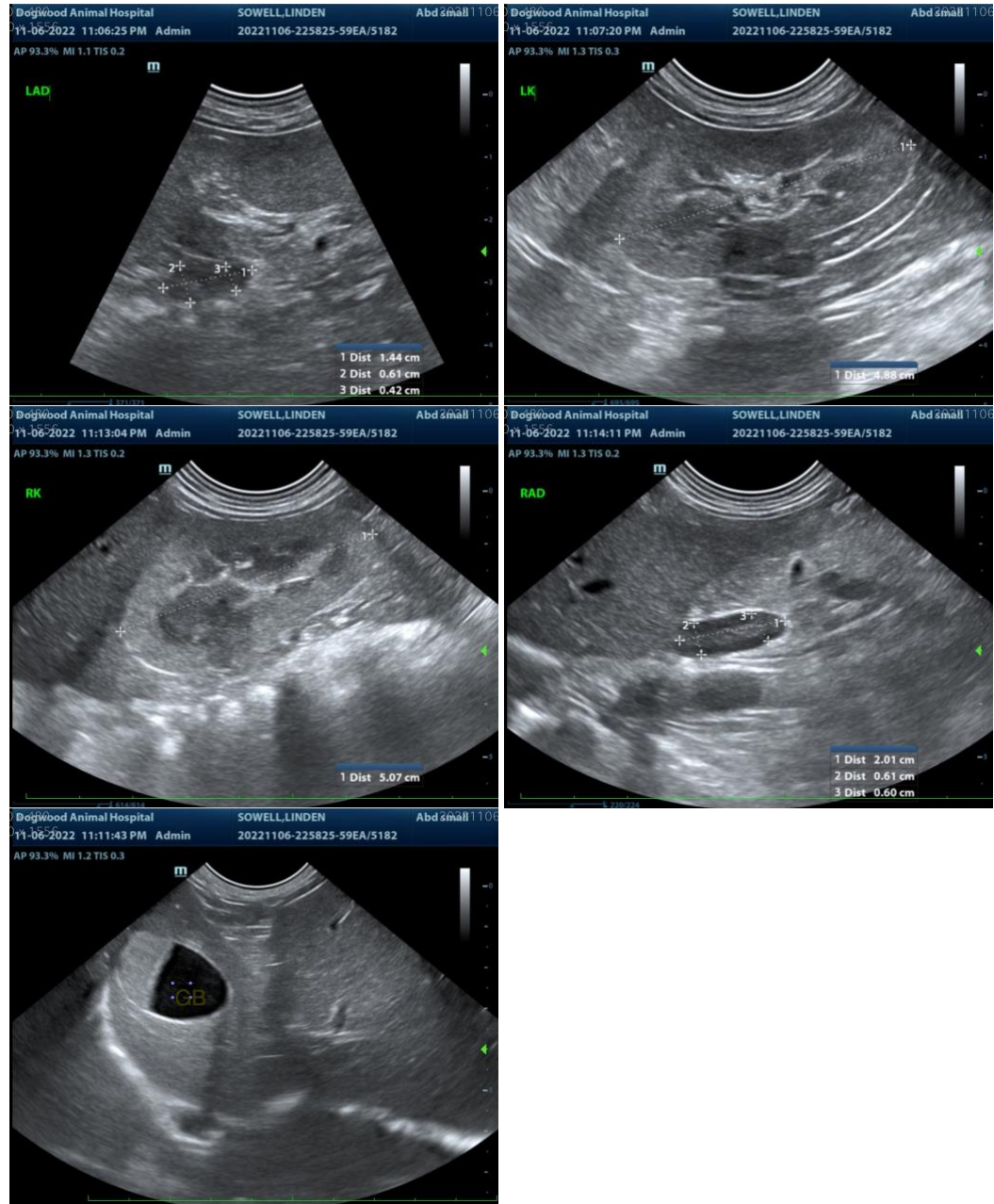
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I



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can be of any further assistance please contact me.

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