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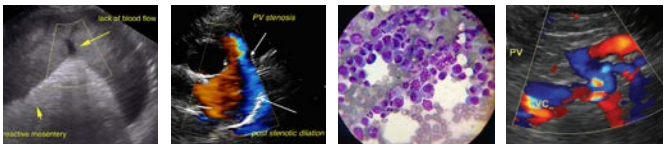


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Buster Rodriguez Theile

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Neutered Male

AGE

13 Years

WEIGHT

13.1 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Megan Cassels-Conway

HOSPITAL NAME

Central Broward AH

REFERRING VET

Dr. Janeen Lezcano

INVOICE

33229

DATE

12/3/21

PRESENTING CLINICAL SIGNS

History of hepatomegaly, mild ALT elevation, marked proteinuria, hypertriglyceridemia. P PU/PD and having urinary accidents and loss of control, will urinate in house after just coming in from outside. History of KCS managed with cyclosporine ophthalmic and optixcare, as well as atopy managed with cytopoint. Low dose dexamethasone suppression test done 5/2020 and was wnl.
Abnormal PE/Chem/CBC/UA Results: 11/17/2021 CBC: plt ct: 614H Chem: ALT: 130H, Phos: 6.1H, K: 6.1H, Cl: 99L, choles: 370H, triglyc: 669H T4: 1.2 resting cortisol: 5.4 HW: NEG UA: SG: 1.015, 3+ prot, quiet sediment UPC: 10.4HHHH UCS: no growth radio consult: 1. moderate to marked hepatomegaly w cranioventral abd mass-effect that appears confluent w liver 2. equivocal intestinal paralytic ileus 3. unremarkable upper and lower urinary tract

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 prostate is normal in size and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.7 cm) with numerous cortical cysts visualized. 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.05) with numerous small cortical cysts. 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large, measuring 1.43 cm at the cranial pole, 0.91 cm at the caudal pole, and 2.8 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in appearance, in that the cranial pole is larger than the caudal pole, creating an isoechoic nodule in the cranial pole. There is no evidence of vascular invasion visualized.

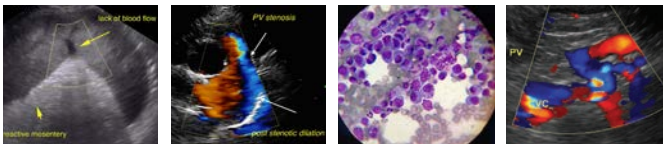
The right adrenal gland is normal in size measuring 0.49 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal.

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the



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vasculature and biliary tract appear normal. There are numerous ill-defined, hypoechoic nodules visualized throughout the parenchyma, measuring approximately 0.5-1.0 cm in diameter.

The gall bladder lumen is moderately distended. The wall of the gall bladder has irregular, small polypoid projections and there is a moderate amount of non-organized echogenic debris. The gallbladder walls measures 0.49 cm. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. 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 layers 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

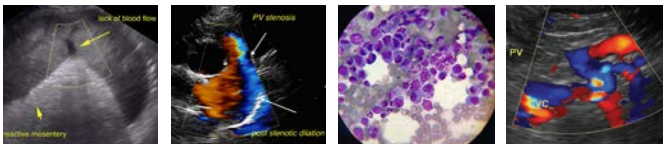
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Enlarged cranial pole of the left adrenal gland – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Large, heterogenous liver with ill-defined hypoechoic nodules – 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.
- Mildly thickened gallbladder wall with small polypoid lesions – The significance of the gall bladder polyps and debris is unclear. This could represent an early mucocele, cholestasis, or chronic inflammation, or could be an incidental finding.
- Decreased corticomedullary distinction in both kidneys with small cortical cysts

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is nodule present on the Left adrenal gland. This nodule is relatively small and is not deforming the adrenal gland significantly and doesn't appear to have any evidence of vascular invasion.



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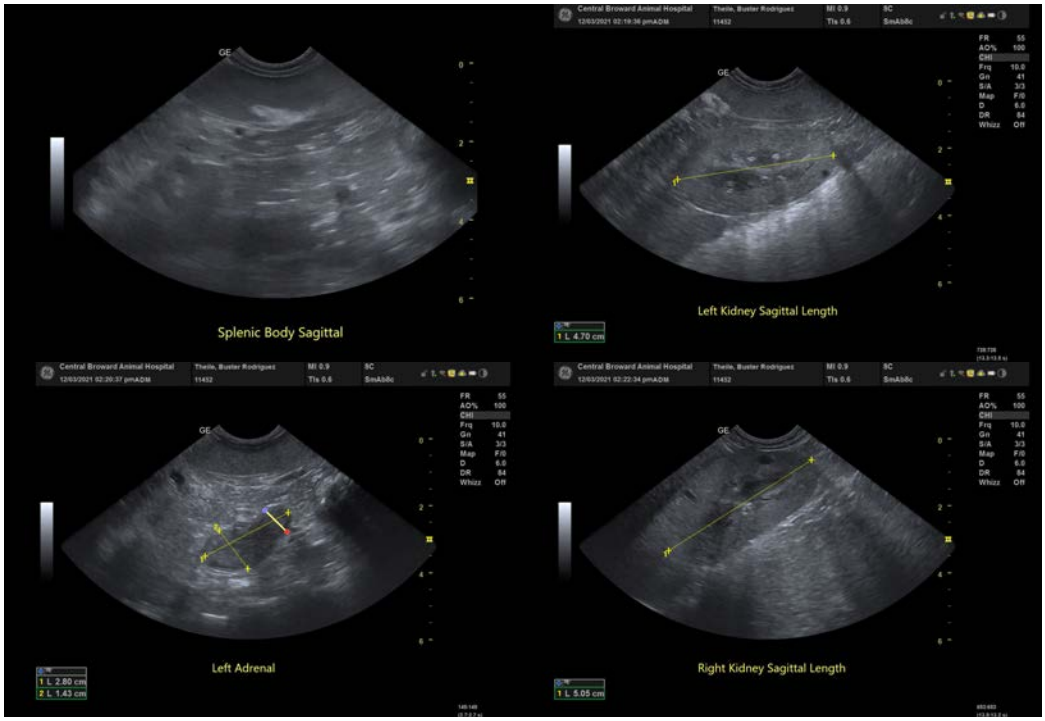
These nodules can be benign or malignant and can secrete hormones or be non-active. Options moving forward include:

- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- If no symptoms of cushings are present, consider either referral for surgery or continued monitoring with ultrasound (in 3-4 months).
- Many of these nodules can be benign and incidental in nature, unfortunately that is difficult to determine with a single ultrasound.

In this case specifically, the adrenal panel may be helpful, as there is the possibility that this dog is creating a hormone other than cortisol and therefore can't be diagnosed with Cushing's by normal endocrine testing.

The changes observed in the kidneys are consistent with age related kidney disease and correlate with the history of renal disease provided in the history. As mentioned above, recommend a blood pressure evaluation and treatment for the proteinuria reported (UPC 10.4 per history). If not already done, I would recommend an ultra low-fat prescription diet such as Royal Canin low-fat GI to help control triglyceride levels. I'd recommend thyroid testing (if not already done), and I would consider starting Ursodiol as preventative measure due to the gallbladder changes visualized.



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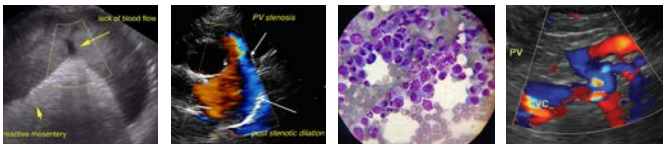

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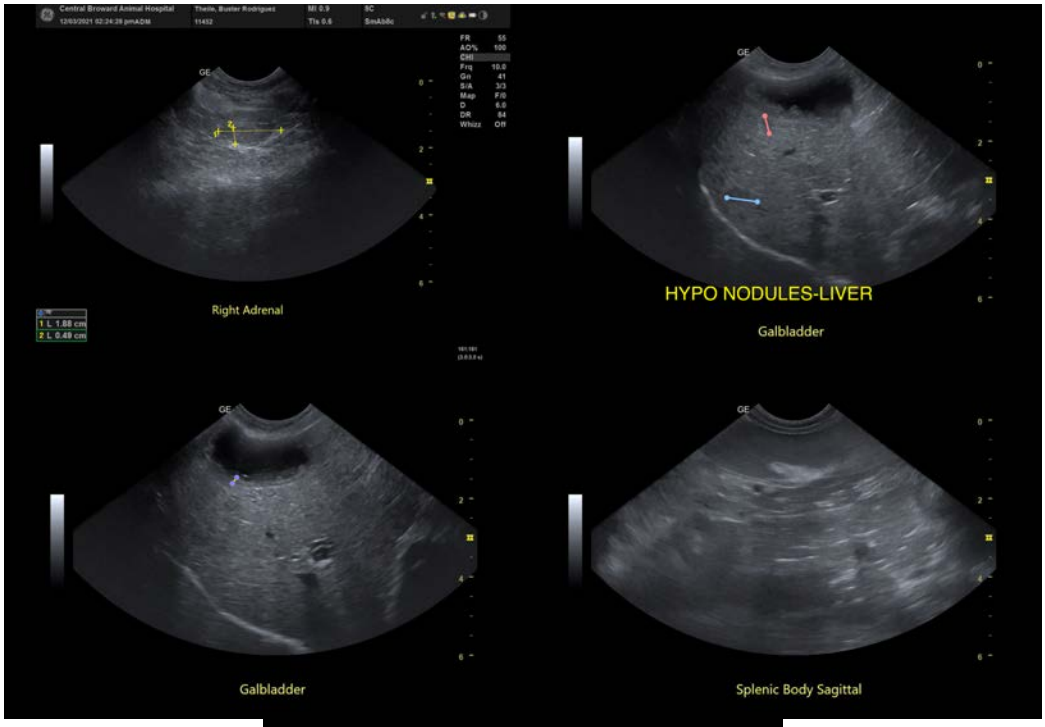

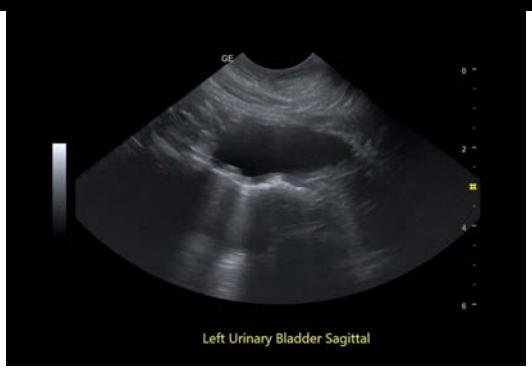

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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