IMAGING PERFORMED BY

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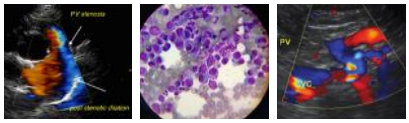

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DATE

10/15/21

PATIENT

Wilson Devine

SPECIES

Canine

BREED

Labrador

SEX

Neutered Male

AGE

2010

WEIGHT

108 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Jones

INVOICE

13782

PRESENTING CLINICAL SIGNS

History: Inappetance, lethargy, diarrhea, vomiting, history of arthritis but no recent history of eating anything abnormal.

Current Medications: Cerenia injuction 10/11/21. Metronidazole 500mg - started 10/9/221. Flortiflora - started 10/9.
Lab Results: cbc, rbc', hct, chem- wnl
Date of Previous IntraPet Ultrasound: No previous
Sedation: not needed
Stat Report: not requested

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 (1.08 cm) 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 (8.0 cm). Overall echogenicity is slightly hyperechoic with mildly decreased corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Mild pyelectasia noted at 0.39 cm. Small shadowing non-obstructive mineralization were present. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.31 cm). Overall echogenicity is slightly hyperechoic with decreased corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Severe pelvic dilation/mild hydronephrosis evident with pyelectasia noted at 2.4 cm. The proximal ureter is severely diulated, measuring 2.23 cm. There are small non-obstrcutive mineralizations withint he kidney, no evidence of ureteral obstruction is observed. The ureter can be followed to the level of the aortic trifurcation and then visualization is lost.

Adrenal Glands

The left adrenal gland is large in size measuring 0.74 cm at the cranial pole and 1.44 cm at the caudal pole x 3.26 cm length. It is observed in its normal position cranial to the left renal artery. The appearance is somewhat irregular in that the caudal pole is large, but the parenchyma is homogeneous and hypoechoic creating the effect of a caudal adrenal nodule.

The right adrenal gland is normal in size measuring 0.72 cm. 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, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver
The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed. The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. 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 (0.44 cm in wall thickness) and the jejunum measured as normal (0.34 cm.) 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/region of 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 lymphadenomegally. 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

- Right sided hydronephrosis and hydroureter- Possible differentials for the hydronephrotic kidney include a ureterolith, ureteral stricture, tumor of the bladder or ectopic ureter. None of these is clearly visualized on todays scan. Consider contrast CT of the kidney.

- Enlarged caudal pole of the left adrenal gland- Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochdromocytoma), hyperplasia, inflammation, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

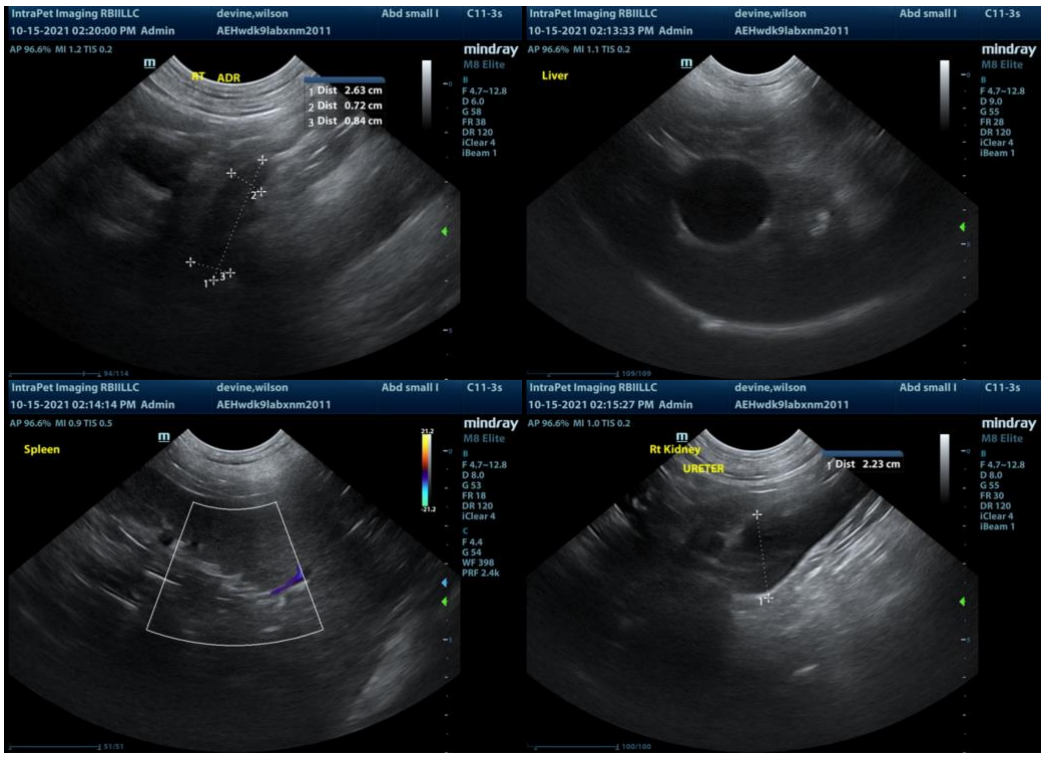
There is right sided hydronephrosis and hydroureter evident with no obvious obstruction visualized. I recommend a contrast CT scan to further evaluate this area. Additionally, there is a left sided adrenal nodule. This could be an incidental finding or could represent an early cancerous process and this could be an active hormone secreting nodule or be non-active.

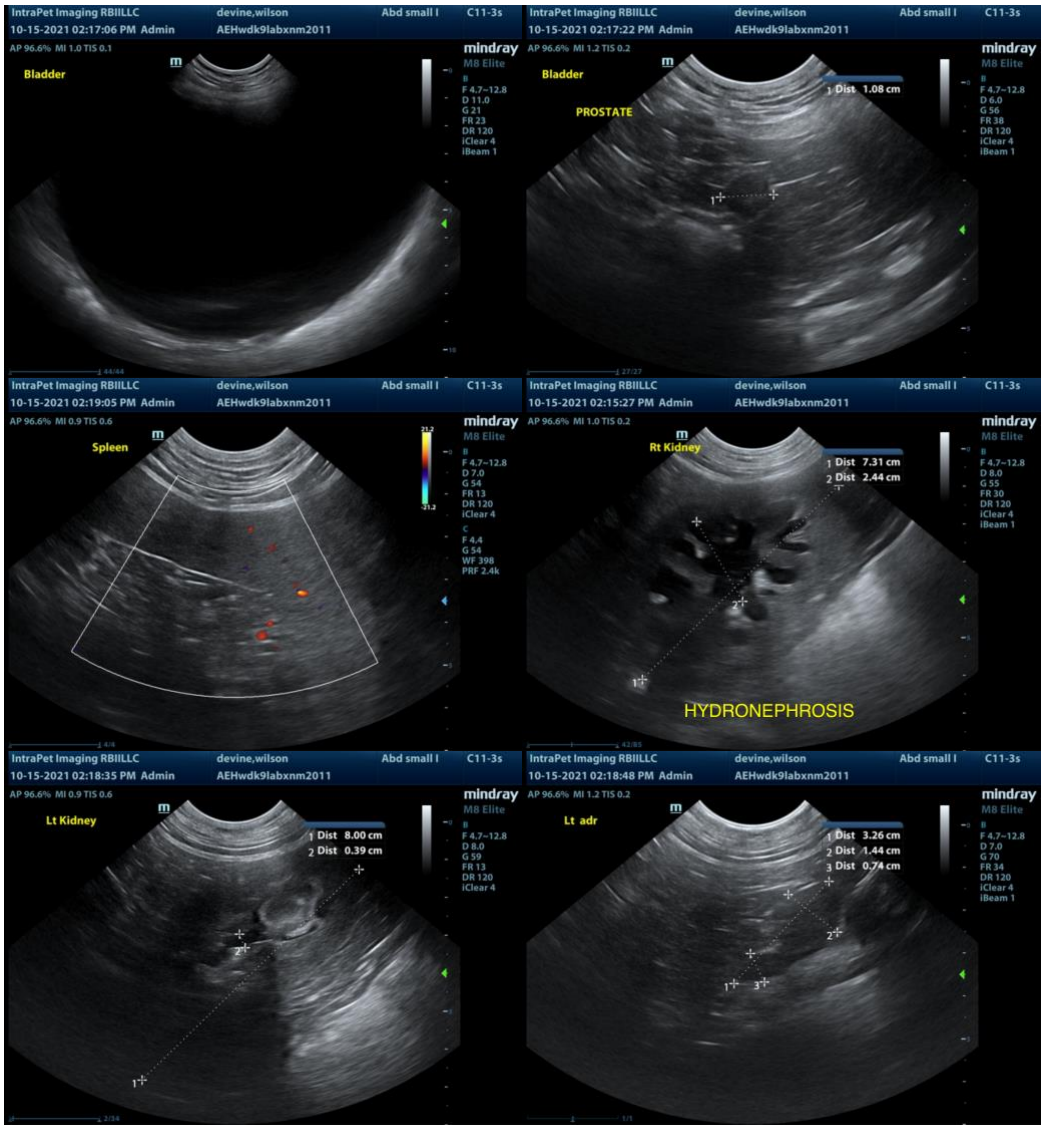
There is nodule present on the left adrenal gland. This nodule is relatively small and is not deforming the adrenal gland significantly and doesn't appear to have any evidence of vascular invasion.

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.

Unfortunately, while both of the abnormalities are significant, it is difficult (but not impossible) to correlate them with a history of anemia and GI signs. If possible, I think the next best step would be to consider advanced imaging of both the left adrenal and the right kidney. In addition, you will see more detail on the bowel, pancreas, etc., which could be helpful. I recommened a GI panel with quantitative PLI/TLI/cobalamin/folate to get more information regarding the pancreas and small intestine. I recommend 3 view thoracic radiopgraphs, urinalysis and urine culture.





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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