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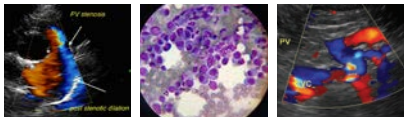

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DATE

6/1/22

PATIENT

Dewey Horwitz

SPECIES

Canine

BREED

Dachshund

SEX

Neutered Male

AGE

9/20/10

WEIGHT

9/20/10

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Timonium AH

REFERRING VET

Dr. Kauder

INVOICE

38170

PRESENTING CLINICAL SIGNS

PU/PD for 2 months. Normal CBC/Chem/T4/FT4/UA. LDDS normal. First morning USG 1.020 on 5/17/22.

Current Medications: None.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
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, or masses. There is a small pile of hyperechoic shadowing material in the dependent portion of the urinary bladder, most consistent with a pile of sandy debris or a small stone. This area measures approximately 0.72 cm. Correlate with abdominal radiographs.

The prostate is normal in size (0.84 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 (5.29 cm) with a non-obstructive nephrolith measuring 0.56 cm. 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, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.13 cm) with a non-obstructive nephrolith measuring 0.38 cm and mild pyelectasia at 0.21 cm. 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 infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.71 cm at the cranial pole, 0.74 cm at the caudal pole, and 1.88 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat abnormal in appearance in that there is a hyperechoic nodule towards the cranial pole measuring 0.47 cm x 0.40 cm. This nodule does not significantly deviate the shape of the adrenal gland, and there is no obvious vascular involvement.

The right adrenal gland is normal in size measuring 0.72 cm at the cranial pole, 0.63 cm at the caudal pole, and 2.25 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is somewhat abnormal in appearance in that there is a large, hyperechoic nodule in the mid section of the adrenal gland, measuring 1.0 cm x 0.79 cm. There is no obvious vascular irregularity noted.

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 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 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. There is a moderate amount of non-organized echogenic debris. 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 uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. Duodenum wall measured 0.39 cm. Jejunum wall measured 0.36 cm. There is mild mucosal speckling observed. 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 prominent and mottled compared to the surrounding isoechoic 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.

PRIMARY FINDINGS

- Focal area of hyperechoic shadowing material in the dependent portion of the urinary bladder – most consistent with sandy debris or small stones. Correlate with abdominal radiographs.

- Hyperechoic nodules visualized in both adrenal glands – These lesions could represent foci of benign hyperplasia, adenomas, etc., or could represent early mass lesions, metastasis, etc.

- Large, heterogeneous liver – 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.

SECONDARY FINDINGS

- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

- Mildly thickened small intestine with occasional mucosal speckling – The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a hyperechoic nodule visualized in both adrenal glands. This could be a benign lesion or could represent an early cancerous lesion (metastatic versus primary adrenal). At this time, they are relatively small and minimally deforming of the adrenal glands. This is difficult because these could represent an incidental finding, or something much more serious, and this is not an easy area to sample. I would primarily focus on following these lesions with ultrasound, and working up the PU/PD, unless a very aggressive course (bilateral adrenalectomy) is desired at this time.

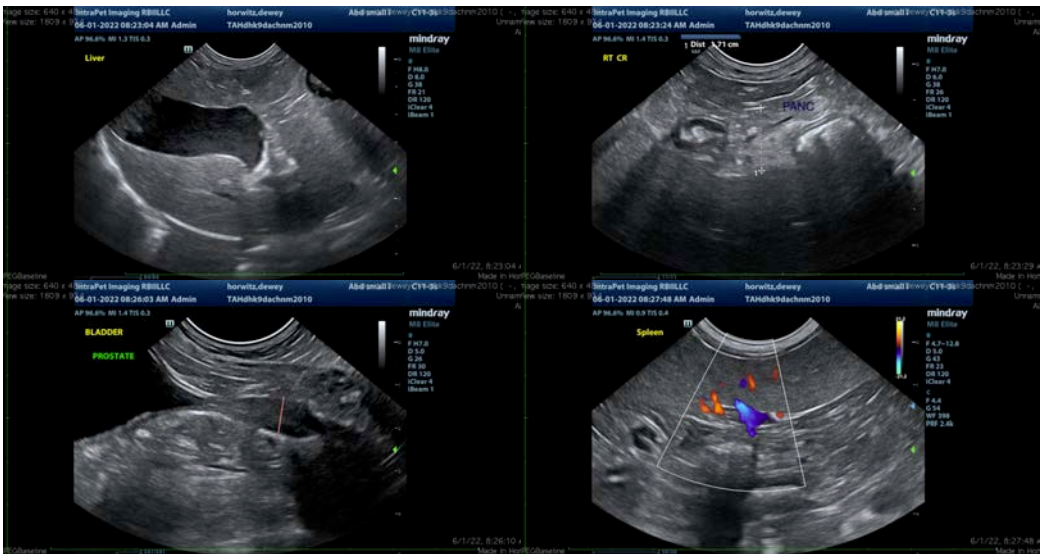
- Recommend blood pressure evaluation. If hypertensive, consider testing catecholamine levels for a possible pheochromocytoma.

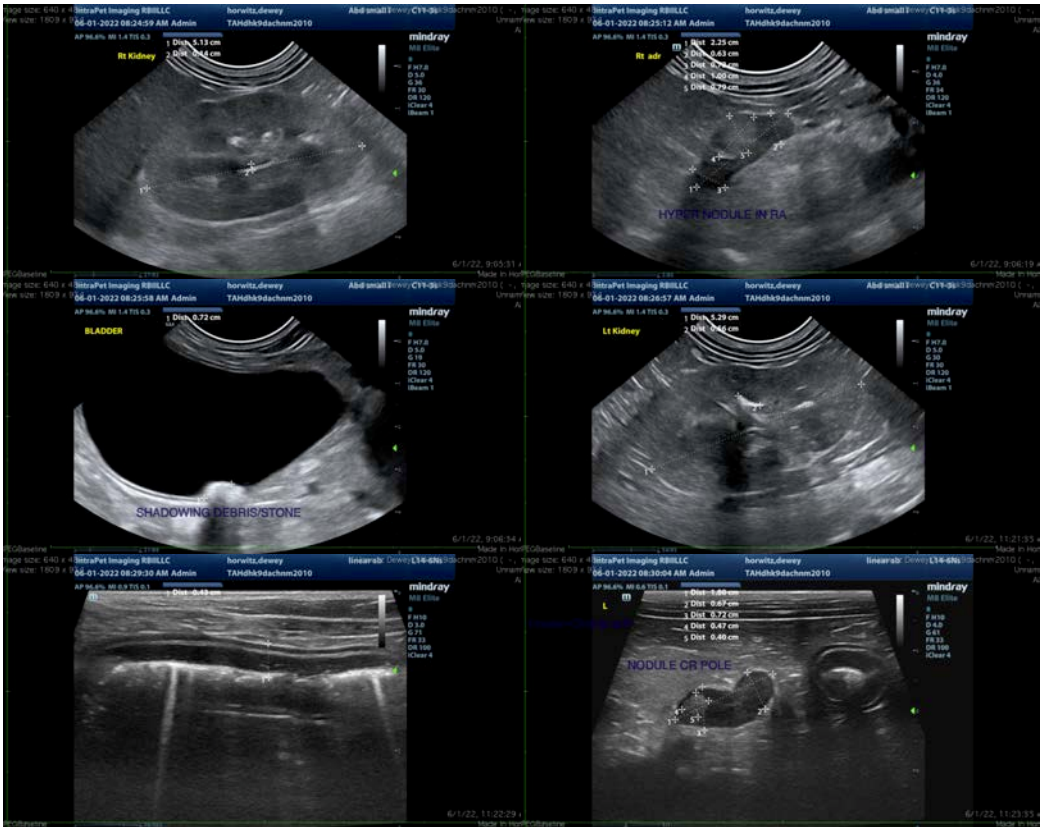
- If signs of Cushing's are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol.

- In the unlikely event that these are aggressive adrenal tumors, they can grow and change rapidly. Consider repeat ultrasound in 6-8 weeks, sooner if there are concerns regarding how the pet is doing clinically.

Additionally, make sure to look for other causes of PU/PD. There is sandy debris/stones in the urinary bladder. Correlate with abdominal radiographs, urinalysis and culture. Make sure to confirm normal calcium levels, and consider liver dysfunction if liver enzymes are elevated, etc.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.





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.

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