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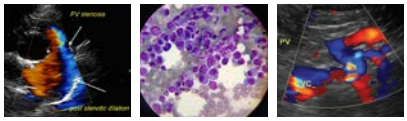
IntraPet.com



SonoPath
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DATE

11/4/22

PATIENT

Terra Reinhardt

SPECIES

Canine

BREED

Pit Bull X

SEX

Spayed Female

AGE

10/24/09

WEIGHT

66.8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Festival Vet Clinic

REFERRING VET

Dr. Davies

INVOICE

42564

PRESENTING CLINICAL SIGNS

Terra has been polyuric, polydipsic, and polyphagic. She has also been panting more frequently.

Current Medications: None.
Lab Results: Blood pressure 210. both increased renal values, isosthenuria, proteinuria with UPC 4.6, and a high ALP.
LDDST consistent with cushing's but didn't differentiate between adrenal and pituitary.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Declined.

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 left kidney has a normal shape and size (6.45 cm) with pyelectasia at 0.37 cm. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.09 cm) with pyelectasia at 0.60 cm and a 1.5 cm cortical cyst. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large and irregular, measuring 2.82 cm at the cranial pole, 1.56 cm at the caudal pole, and 4.65 cm in length. It is observed in its normal position cranial to the left renal artery. It is abnormal in appearance in that it is heterogeneous, irregular, and hypoechoic, creating a mass effect that is believed to be invading the caudal vena cava, as there is soft tissue or clot visualized in the cava at the level of the left kidney.

The right adrenal gland is large and irregular, measuring 1.51 cm at the cranial pole, 2.17 cm at the caudal pole, and 4.39 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 abnormal in appearance in that the caudal pole is large and hypoechoic, creating a mass effect measuring 2.44 cm x 2.3 cm.

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 significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation.

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

- Bilateral adrenal masses with suspected vascular invasion of the left adrenal – Findings are concerning for possible concurrent neoplastic lesions, and there is evidence of a large soft tissue structure in the caudal vena cava, most consistent with a mass effect or clot.

- Bilateral renal pyelectasia – Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

- 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.

- Large gallbladder debris – A large amount of debris is evident in the gall bladder with no evidence of a mucocele or associated inflammation at this time. This could represent an early mucocele or cholestasis, with minimal evidence of associated inflammation at this time. Continued monitoring of labwork and ultrasound are warranted for progression of this lesion. Ursodiol therapy could be considered.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Both adrenal glands are large and irregular, and there is a large soft tissue structure visualized within the caudal vena cava at the level of the left kidney. These findings are concerning for possible bilateral neoplastic change and vascular invasion. Given the hypertension reported, these lesions could be consistent with

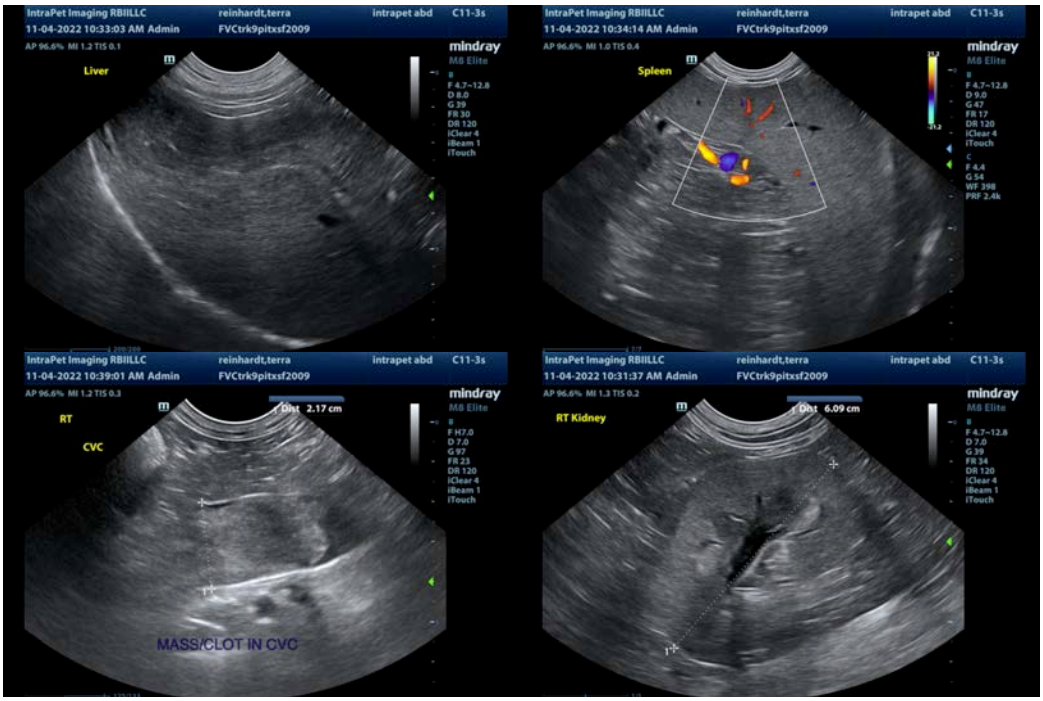
pheochromocytomas, carcinomas, etc., as hypertension can be seen both with Cushing's and with pheochromocytomas. Recommend urine catecholamine testing (I believe this is done at Marshfield Labs) and treatment with anti-hypertensives. If the blood pressure can be normalized and catecholamine levels are normal, you could consider a fine needle aspirate of the adrenals. Additionally, I recommend 3-view thoracic radiographs.

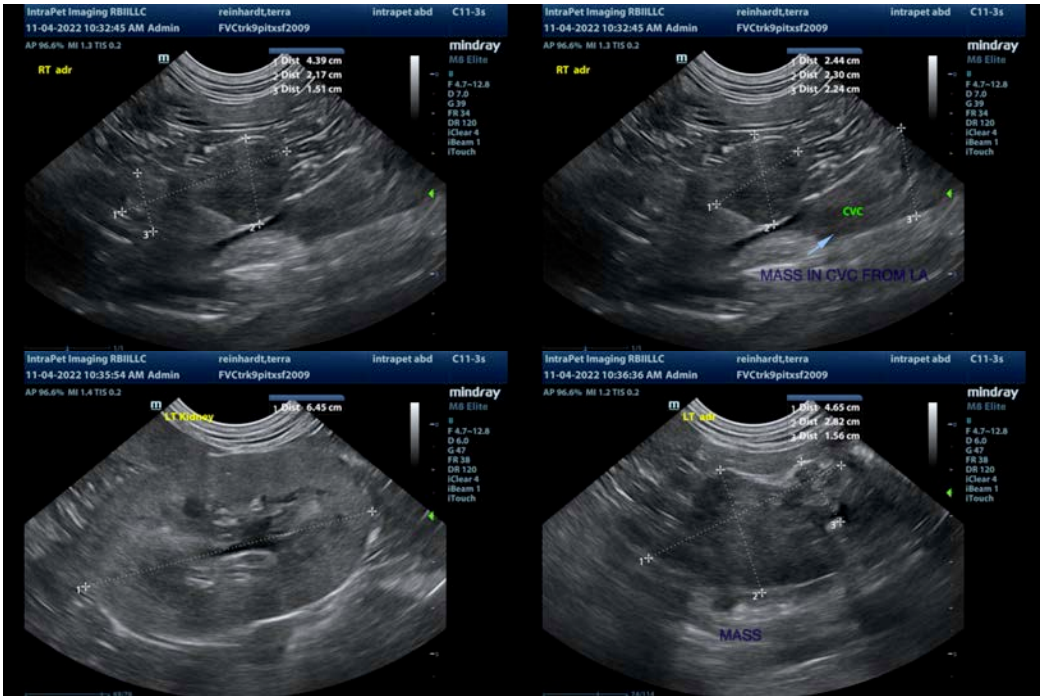
Options moving forward would be palliative medical care including anti-hypertensives, likely Plavix to try to prevent thromboembolic disease, and you could consider medical therapy to reduce cortisol levels. If a more aggressive approach is desired, you could consider a contrast CT scan to better delineate the soft tissue structure and the extent of the disease present. Additionally, you can look with more sensitivity for evidence of metastasis, as some caval lesions can be removed by a skilled, boarded surgeon, but prognosis is very guarded and options are somewhat limited.

There is bilateral pyelectasia visualized. Recommend urinalysis and culture to screen for possible pyelonephritis.

The changes in the liver are most likely consistent with a vacuolar hepatopathy secondary to cortisol excess.

There is a large amount of debris visualized in the gallbladder. Consider chronic Ursodiol therapy and continued monitoring for progression of this lesion.





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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