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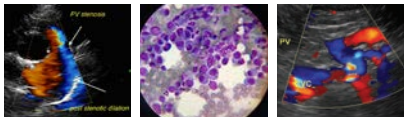
IntraPet.com



SonoPath

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DATE

7/26/22

PATIENT

Penny Escobar

SPECIES

Canine

BREED

Shepherd X

SEX

Spayed Female

AGE

6/16/09

WEIGHT

56 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Martinoli

INVOICE

39808

PRESENTING CLINICAL SIGNS

June 23 of this year had surgery to remove mass on neck; biopsy showed it was Adenocarcinoma. Margins small but complete. Bloodwork at the time showed elevated liver values but owner believes remainder of BW was WNL. About 1:30 pm today Penny went outside as usual; had BM; ran around a little, then hind legs seemed to give out first, then front legs, and she collapsed. She threw up her breakfast, then laid on ground for a little while. Needed help to get into car. Went to rDVM; she was able to get up and walk at that point. Didn't seem very painful at that point. Went home and in the evening she started panting excessively. Not interested in eating.

Current Medications: None listed.
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, masses or cystic calculi.

The left kidney has a normal shape and size (6.14 cm). Overall echogenicity is normal with adequate 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 (5.13 cm) with a 0.55 cm cyst in the cortex. Overall echogenicity is normal with adequate 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 in size measuring 0.98 cm at the cranial pole, 0.90 cm at the caudal pole, and 3.11 cm in length. It is observed in its normal position cranial to the left renal artery. It is abnormal in appearance in that there is abnormal tissue arising from the cranial pole of the left adrenal gland that appears to be invading the caudal vena cava, creating a mass effect measuring >3.19 cm x 1.61 cm.

The right adrenal gland is normal in size measuring 0.83 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 subjectively normal in size, and echogenicity with irregular margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous ill-defined hyper- and hypoechoic nodules throughout the

parenchyma. One of the more prominent hypoechoic nodules is visualized measuring 2.73 cm. Additionally, there is a hyperechoic nodule measuring 2.73 cm.

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. These changes can be consistent with an early gall bladder mucocele.

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 prominent and mottled compared to the surrounding isoechoic mesentery. The parenchyma appears significantly mottled and almost diffusely nodular in some regions. 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

- Irregular mass effect at the cranial pole of the left adrenal gland with evidence of invasion and a mass effect within the caudal vena cava – findings are concerning for an aggressive adrenal mass. Primary differential would be pheochromocytoma, then carcinoma. Other differentials exist.

- Heterogeneous, prominent/nodular pancreas – could be consistent with chronic pancreatic disease, but neoplasia should be considered as a differential. Recommend fine needle aspirate.

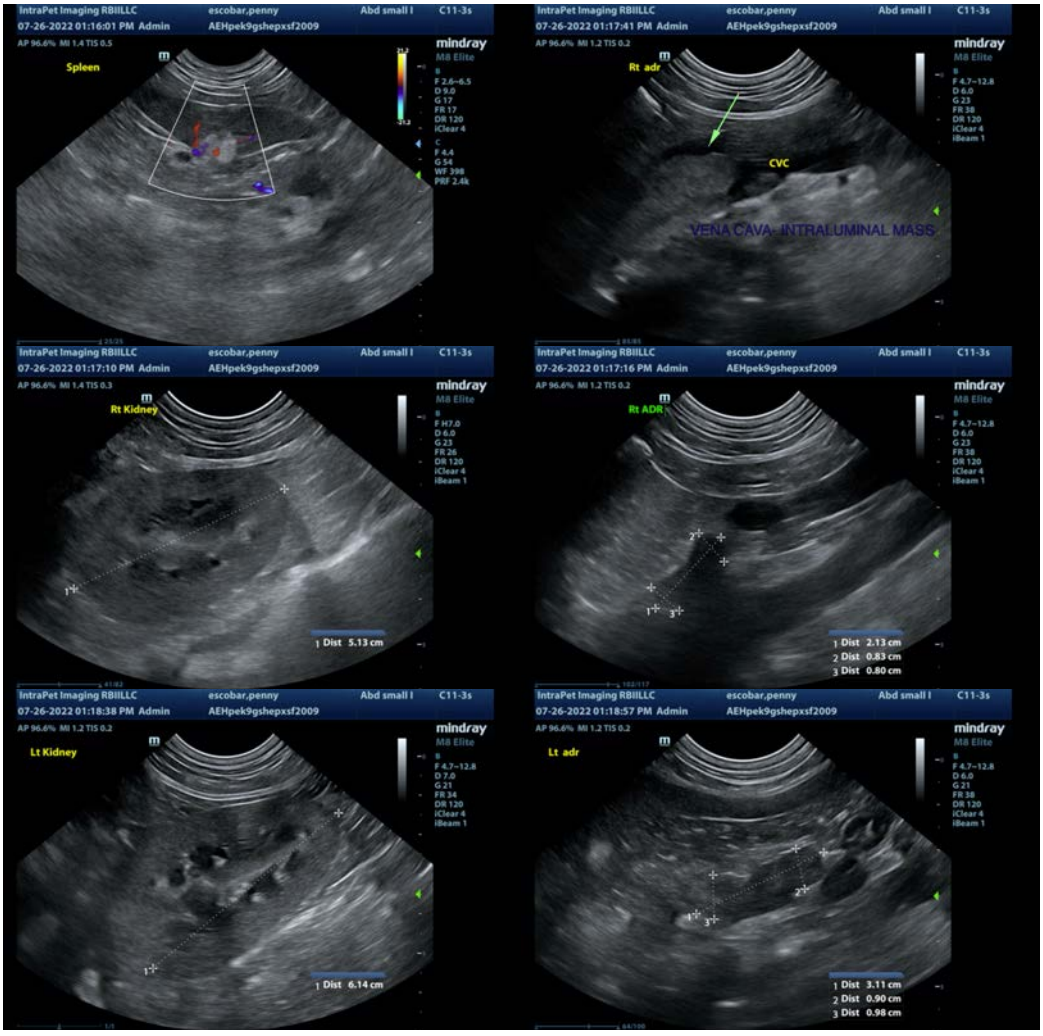
- Heterogeneous liver with hypo- and hyperechoic nodules – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. Given the other abdominal lesions visualized, metastatic lesions must be considered. Recommend a fine needle aspirate.

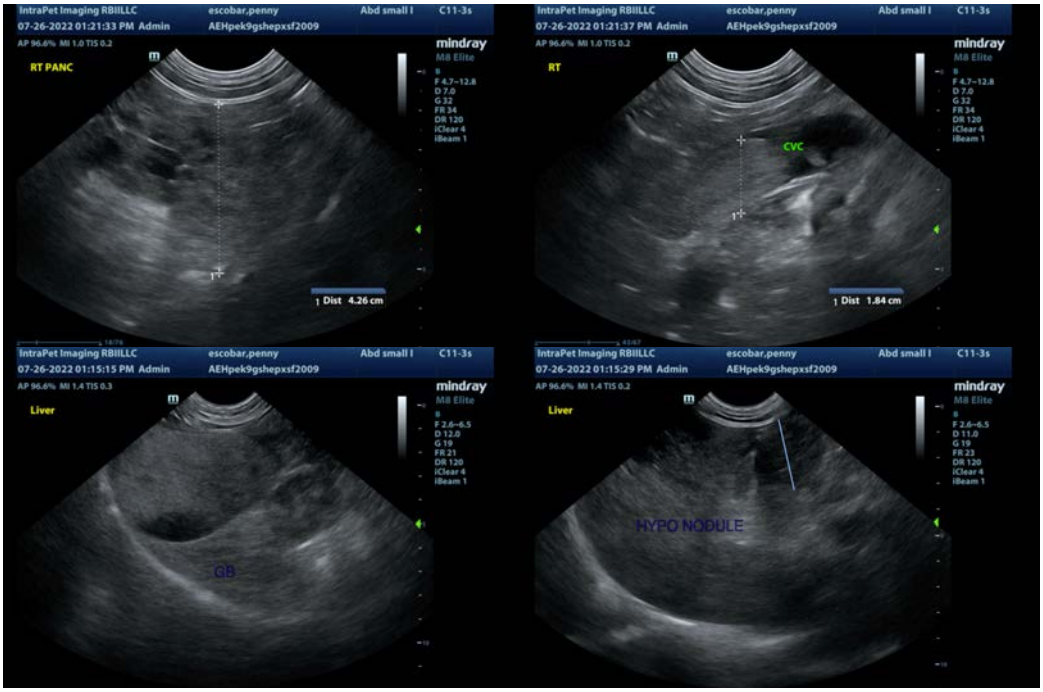
- Large gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large invasive mass effect visualized within the caudal vena cava. This appears to be arising from the cranial pole of the left adrenal gland. Of primary concern would be a pheochromocytoma, carcinoma, etc. Consider blood pressure evaluation. If surgical intervention is considered, then recommend a contrast CT scan both to evaluate the left adrenal mass and to evaluate the other lesions in the abdomen, as metastasis is a concern.

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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