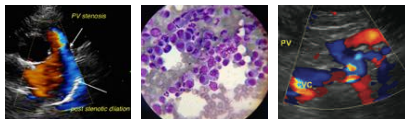
IMAGING PERFORMED BY

IntraPet.com



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DATE
2/22/22

PATIENT
Josie Dill

SPECIES
Canine

BREED
Mix

SEX
Spayed Female

AGE
2/07

WEIGHT
56.2 lbs

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

HOSPITAL NAME
Fork VH

REFERRING VET
Dr. Doherty

INVOICE
96214

PRESENTING CLINICAL SIGNS

Dog had an acute onset of vomiting beginning about 1 week ago which became increasingly weak and then developed anorexia and unable to stand. Physical examination 2/14- Tachycardia with grade 1-2/6 systolic murmur, no dyspnea, cough or labored breathing but slightly increased effort and rate. Lower lip swollen but no ulceration or pain. Abdomen tense to palpation with dilated loops of intestine. Generalized weakness and inability to stand and support self, a degree of ataxia when attempting to walk. Neuro- showed a dull and depressed mentation with a very slight horizontal nystagmus if moving, when sitting quietly no nystagmus was noted. Melena today was noted.
Current Medications: Amoxicillin 500mg BID, Cerenia 60mg QD, Meclizine 25mg QD.
Lab Results: Primarily liver enzyme abnormalities: ALT 284 (10-125), ALKP- out of range, GGT 57 (0-11), Chol 422 (110-320).
Radiographs:
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Pearce RDCS, RVT.

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 (7.24 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. A non-obstructive nephrolith was visualized within the renal pelvis. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.73 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. The right kidney has pinpoint, non-obstructive nephroliths. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large in size measuring 2.5 cm at the cranial pole and 2.51 cm at the caudal pole and 4.08 cm in length. It is observed in its normal position cranial to the left renal artery. It is abnormal in appearance (uniformly enlarged) and has lost its typical bilobed appearance. There is no obvious evidence of vascular invasion. The findings are most consistent with a left-sided adrenal mass.

The right adrenal gland is normal in size measuring 0.66 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. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal lesions are observed in the spleen, but there are too numerous to count, diffuse, hyperechoic foci visualized.

Liver
The liver is subjectively normal in size, and 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 gallbladder lumen is moderately distended. The wall of the gallbladder 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 is moderately dilated with fluid and irregular shadowing material. This is most consistent with normal ingesta and gas. It largely measures at a normal thickness of less than 0.7 cm with some variability due to the presence of rugal folds, but there is a relatively large, focal area that displays increased wall thickness at 1.41 cm and a loss of layering. There is no obvious evidence of thickening in the outflow tract, but this is a concern.

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.

Heart
A brief view of the heart was submitted. No pericardial effusion was seen.

ULTRASONOGRAPHIC FINDINGS
PRIMARY FINDINGS:

- Enlarged left adrenal gland. Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

- Heterogenous 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.

- Focal gastric wall thickening with reduced layering and intraluminal fluid distension. The focal

gastric wall thickening is concerning for a possible infiltrative process (neoplasia, edema, inflammation, etc.). An outflow tract obstruction is not observed, but needs to be considered.

SECONDARY FINDINGS:

- Decreased corticomedullary distinction in both kidneys with non-obstructive nephroliths. The bilateral renal findings are consistent with age-related change. The nephrolith in the left kidney is within the pelvis, but there is no evidence of an obstruction. This should continue to be monitored.

- Pinpoint, hyperechoic foci in the spleen. The foci may be benign lesions, but an underlying neoplastic process cannot be excluded as a possibility. FNA could be considered.

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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is focal thickening of the gastric wall. This could be due to inflammation and edema, ulceration, etc., but based on the melena and poor patient condition this should likely be evaluated or closely monitored with anti-ulcerative therapy. Options for evaluation would include upper GI endoscopy (to look for ulceration) or surgical evaluation (not as sensitive to look for ulceration but would provide better samples).

There is mass present involving the left adrenal gland. This mass is irregular and relatively large. I do not see evidence of clear vascular invasion, but this is still possible. These masses can be benign or malignant and can secrete hormones or be non-active. Options moving forward include:

- 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. (other testing can suffice)

- If adrenal dependent Cushing's is suspected and supported by adrenal function testing consider medical therapy with Lysodren or Trilostane and/or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)-This can be a challenging surgery with significant risk for complication

- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma

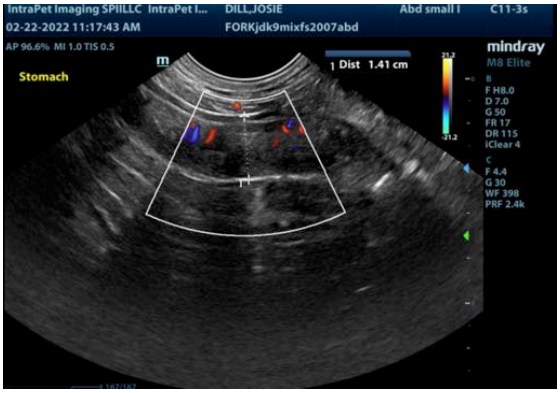
- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.

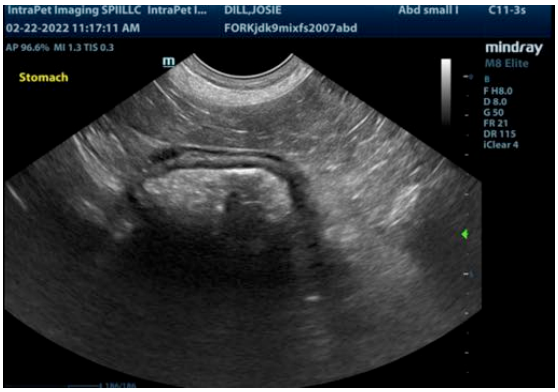
- If no symptoms of Cushing's are present, consider either referral for surgery or if surgery is not an option consultation with a veterinary oncologist regarding chemotherapeutic options and continued monitoring with ultrasound (in 4-6 weeks) can be considered.

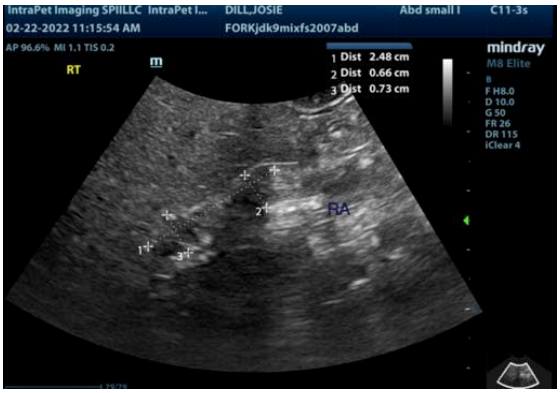
- Some aggressive adrenal tumors can grow quickly and there is risk for acute hemorrhage from vascular invasion.

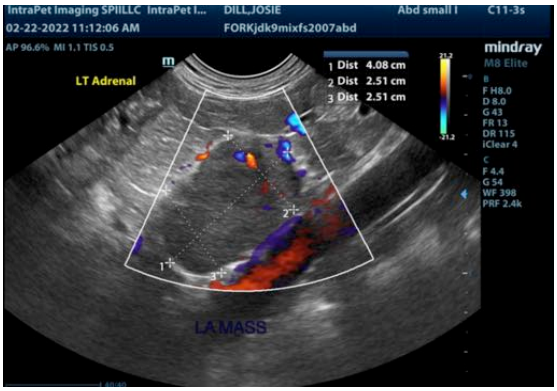
Adrenal function testing should not be considered on this patient until it is stabilized and feeling better. CT imaging could be considered to further evaluate the gastric lesion and the left adrenal gland.

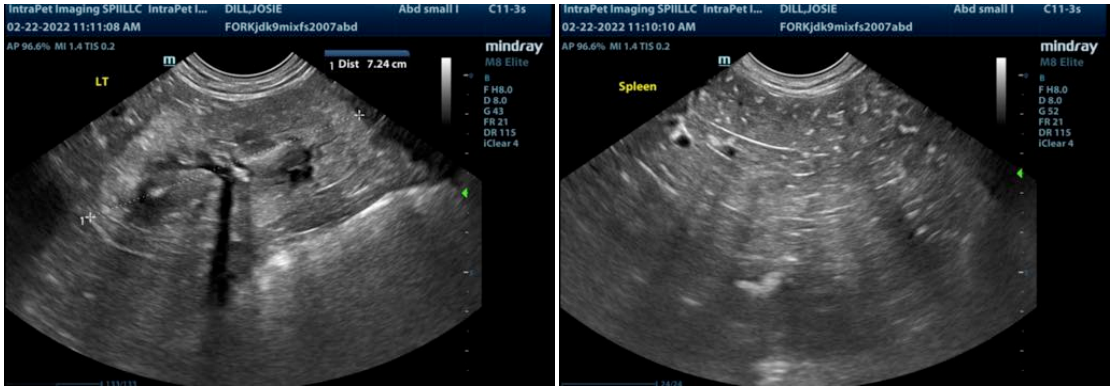
Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.











The information and recommendations provided are based on the images presented by the referring veterinarian. 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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