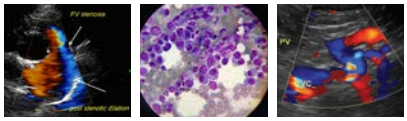
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
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DATE

8/15/23

PATIENT

Lily Belle Caldwell

SPECIES

Canine

BREED

Shih Tzu

SEX

Spayed Female

AGE

10/15/10

WEIGHT

15 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Homeward Bound Vet

REFERRING VET

Dr. Vance

INVOICE

44659

PRESENTING CLINICAL SIGNS

Not eating or drinking. Was doing some vomiting.

Current Medications: None listed.
Radiographs: Concern for something in pyloric region.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

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 (3.82 cm) with mild pyelectasia at 0.46 cm. Overall echogenicity is slightly hyperechoic with mildly reduced 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 (4.81 cm). Overall echogenicity is slightly hyperechoic with poor 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large and irregular in shape, measuring 0.39 cm at the cranial pole and 1.0 cm at the caudal pole and 2.17 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 a nodule visualized associated with the caudal pole measuring 1.22 cm x 0.97 cm. No evidence of vascular invasion is visualized.

The right adrenal gland is large and irregular in appearance, measuring 1.86 cm at the cranial pole, 0.56 cm at the caudal pole, and 2.85 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 there is a mass effect visualized associated with the cranial pole measuring 2.59 cm x 1.97 cm. No evidence of vascular invasion visualized.

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. There is a small hyperechoic nodule visualized within the parenchyma measuring 0.72 cm in diameter.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and 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. Duodenum wall measures 0.47 cm. Jejunum wall measures 0.32 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 right limb of 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.

ULTRASONOGRAPHIC FINDINGS

- Nodule visualized associated with the caudal pole of the left adrenal gland – Current findings favor a benign lesion such as hyperplasia, adenoma, etc. An early neoplastic lesion cannot be ruled out.
- Decreased corticomedullary distinction in both kidneys with mild left-sided pyelectasia – The bilateral renal findings are consistent with age-related change. Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Prominent, mottled right limb of the pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Hyperechoic nodule visualized within the liver – The appearance of this lesion trends toward a benign process. Recommend continued monitoring.
- Mass effect visualized associated with the cranial pole of the right adrenal gland – This mass lesion is larger and more concerning for a possible underlying neoplastic process (carcinoma, pheochromocytoma, adenoma, other).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a mass effect visualized with the right adrenal and a nodule visualized associated with the left adrenal gland. These could be independent processes or the findings could be consistent with metastatic disease (seems less likely). The right adrenal is larger and more consistent with a neoplastic process based on its size, although it appears somewhat rounded and there is no overt invasion noted. The left-sided lesion is smaller and more consistent with a benign nodule. Consider a contrast CT scan to further evaluate these lesions, looking for evidence of invasion and to assess for possible surgical removal of the right adrenal(?).

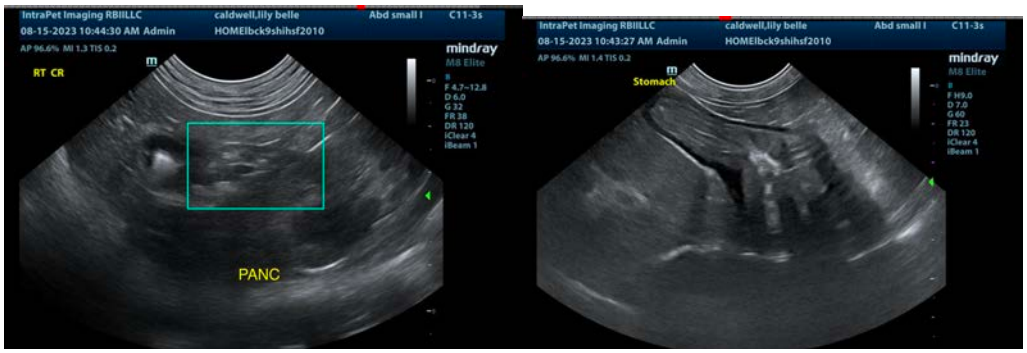
Prior to additional workup, recommend a blood pressure evaluation. If hypertension is present, recommend measuring catecholamine levels. If clinical signs of Cushing's are present, consider adrenal function testing. Interpretation may be confusing based on the multiple lesions present, etc., but it may be helpful to determine if elevated cortisol levels are present.

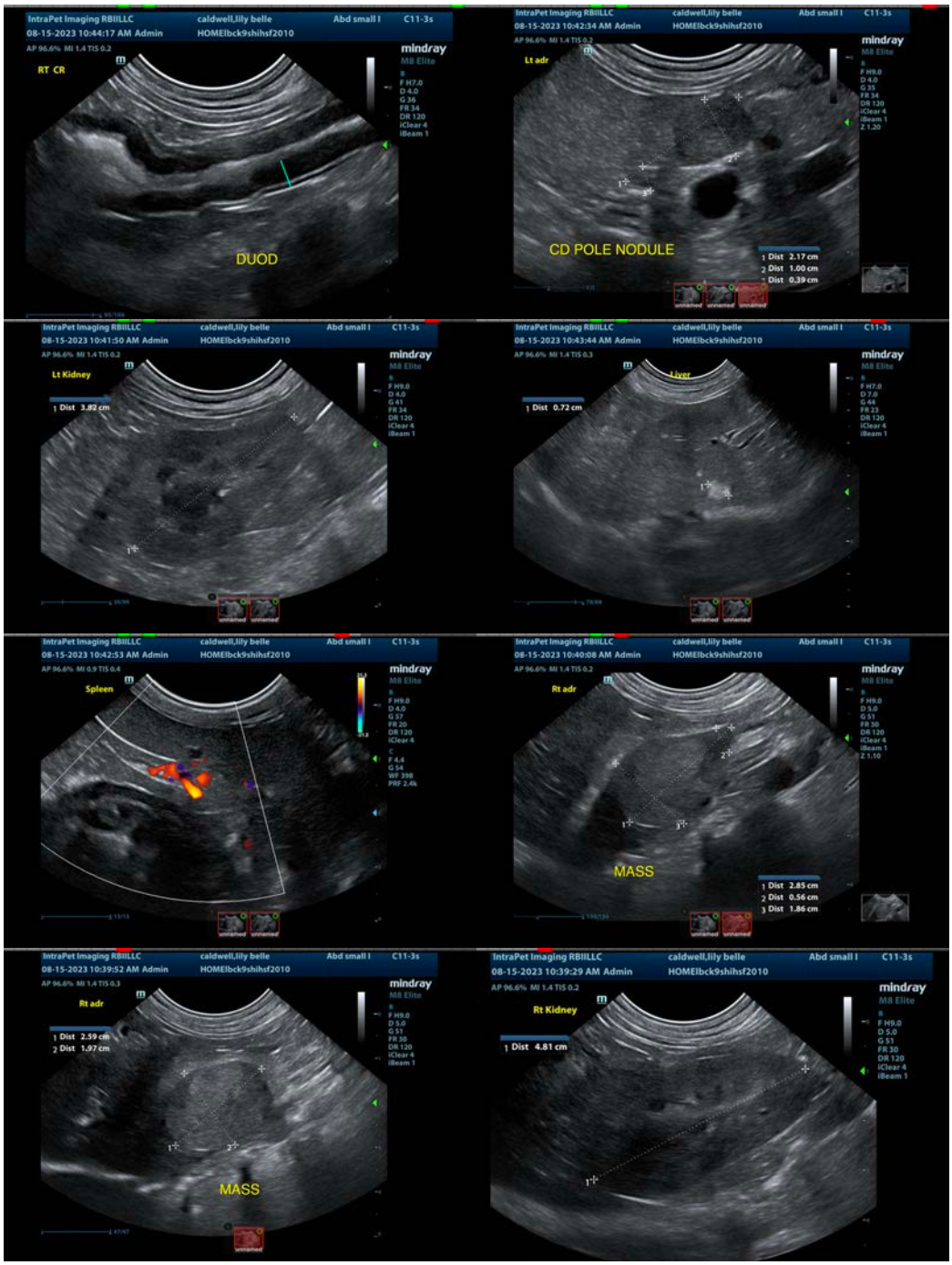
Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

It is very likely that the adrenal lesions are incidental at this time and not associated with the vomiting reported. No obvious focal lesions visualized associated with the gastrointestinal tract to explain these symptoms. The right limb of the pancreas is slightly prominent but not overtly inflamed. Consider the possibility of acute gastroenteritis, provided routine bloodwork is normal and there is no evidence concurrent metabolic disease.

Consider such differentials as food allergy/dietary intolerance, GI parasitism, acute pancreatitis, dietary indiscretion, non-specific gastroenteritis, ingested foreign material, IBD and less likely neoplasia, etc.…

- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Consider chronic probiotic therapy.
- If symptoms are persistent despite treatment for non-specific gastroenteritis, consider repeat imaging (radiographs +/- ultrasound) and consider obtaining GI biopsies.

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Lt adr
CD POLE NODULE
1 Dist 2.17 cm
2 Dist 1.00 cm
3 Dist 0.39 cm
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Liver
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Spleen
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Rt adr
MASS
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2 Dist 0.56 cm
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Rt adr
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2 Dist 1.97 cm
MASS
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Rt Kidney
1 Dist 4.81 cm

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.

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