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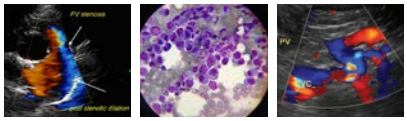
IntraPet.com



SonoPath

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DATE

12/1/22

PATIENT

Ollie Rush

SPECIES

Canine

BREED

Maltese X

SEX

Neutered Male

AGE

3/30/09

WEIGHT

11.6 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Bay Country VH

REFERRING VET

Dr. Smith

INVOICE

43127

PRESENTING CLINICAL SIGNS

Anorexia, occasional vomiting.

Current Medications: Trilostane 20mg SID, Pimobendan 2.5mg 1 ½ BID, Benazapril 5mg ½ BID, Theophylling 25mg BID, Spironolactone 25mg ¼ BID, Entyce.
Lab Results: Mild increase in BUN, SDMA.
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 visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (3.31 cm) with pyelectasia at 0.52 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is scant inflammation and surrounding fluid, likely associated with the left adrenal mass. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.51 cm) with pyelectasia at 0.55 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 nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large and irregular in shape, measuring 1.21 cm at the cranial pole, 3.78 cm at the caudal pole, and 4.75 cm in length. It is observed in its normal position cranial to the left renal artery. It is very abnormal in appearance in that it is large and there is a large cyst on the caudal pole measuring 2.23 cm x 1.61 cm. Findings are most consistent with a left adrenal mass. No vascular invasion is visualized. There is surrounding inflammation and scant fluid.

The right adrenal gland is borderline large, measuring 0.60 cm at the cranial pole, 0.88 cm at the caudal pole, and 1.67 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 hypoechoic nodule in the caudal pole measuring approximately 1.28 cm x 0.81 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. There is a cyst visualized in the left side of the liver, measuring 1.07 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.

Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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 measures 0.48 cm. Jejunum wall measures 0.30 cm. Mild mucosal speckling is present. 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.

Other

Ringdown artifact is visualized at the level of the diaphragm. This can be consistent with pulmonary parenchymal disease. Recommend 3-view thoracic radiographs.

ULTRASONOGRAPHIC FINDINGS

- Large cystic left adrenal gland – Findings are most consistent with an adrenal mass. Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

- Decreased corticomedullary distinction in both kidneys with significant bilateral pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. 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 with a cystic structure – 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. The cystic structure is most consistent with a benign hepatic cyst.

- Large amount of debris visualized in the gallbladder – 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.

- Borderline large right adrenal gland with hypoechoic nodule on the caudal pole – This could represent a benign or neoplastic lesion.

- Mild mucosal speckling visualized associated with the small intestine – Bright mucosal speckling has been postulated to represent dilated lacteals or focal accumulations of mucus, cellular debris, etc.. in the mucosal crypts.

- Ringdown artifact visualized – This can be consistent with pulmonary parenchymal disease.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is large mass effect associated with the left adrenal. Included in this mass effect is a large cystic region. Despite the size, this appears fairly well encapsulated and could represent a large benign lesion or a neoplastic lesion, and could be secreting hormone or be non-active. These are possible recommendations for evaluation of an adrenal mass:

- If signs of cushings 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 cushings 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 cushings 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.

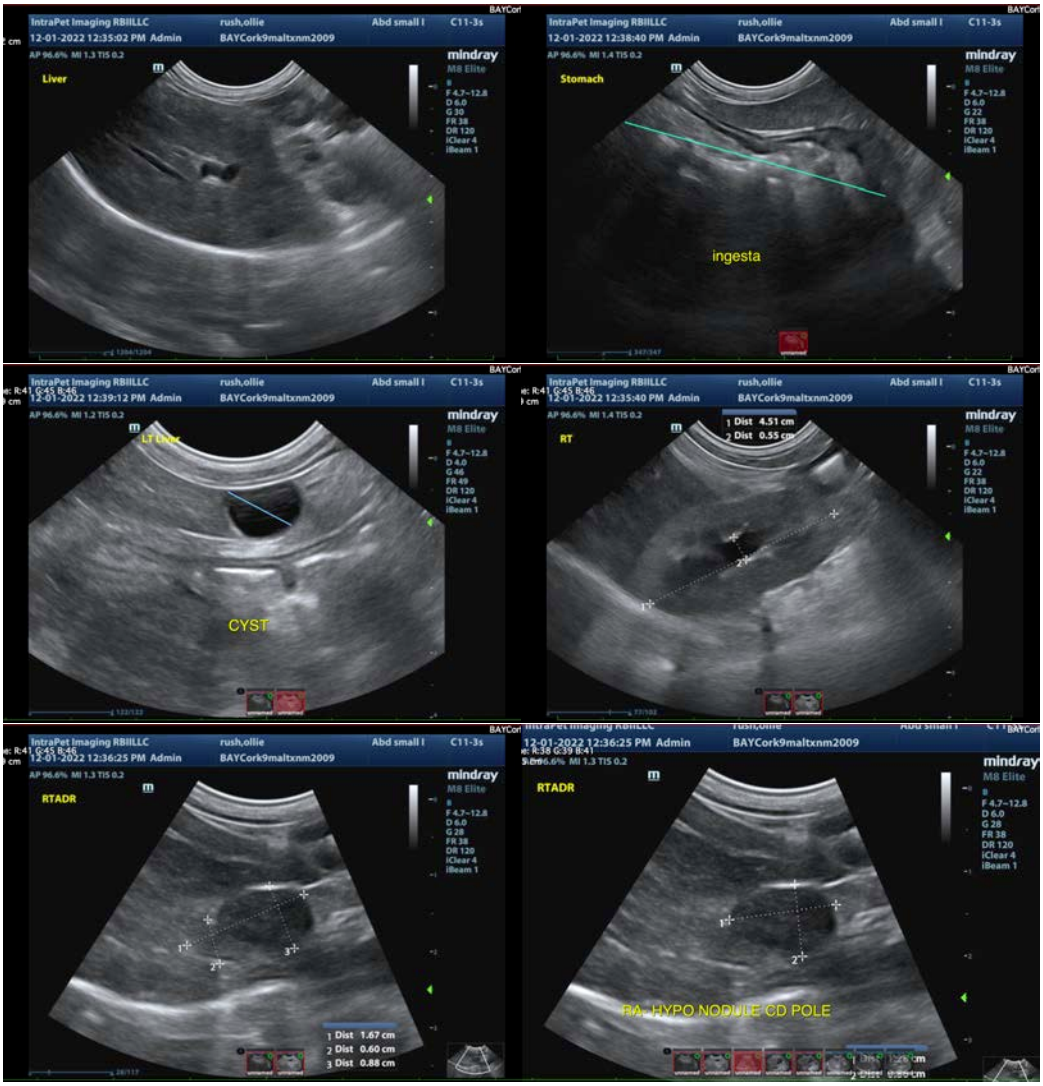
The left adrenal gland is surrounded by fluid and hyperechoic tissue. I suspect this is painful and inflamed, and regardless of additional testing, this patient would benefit from its removal.

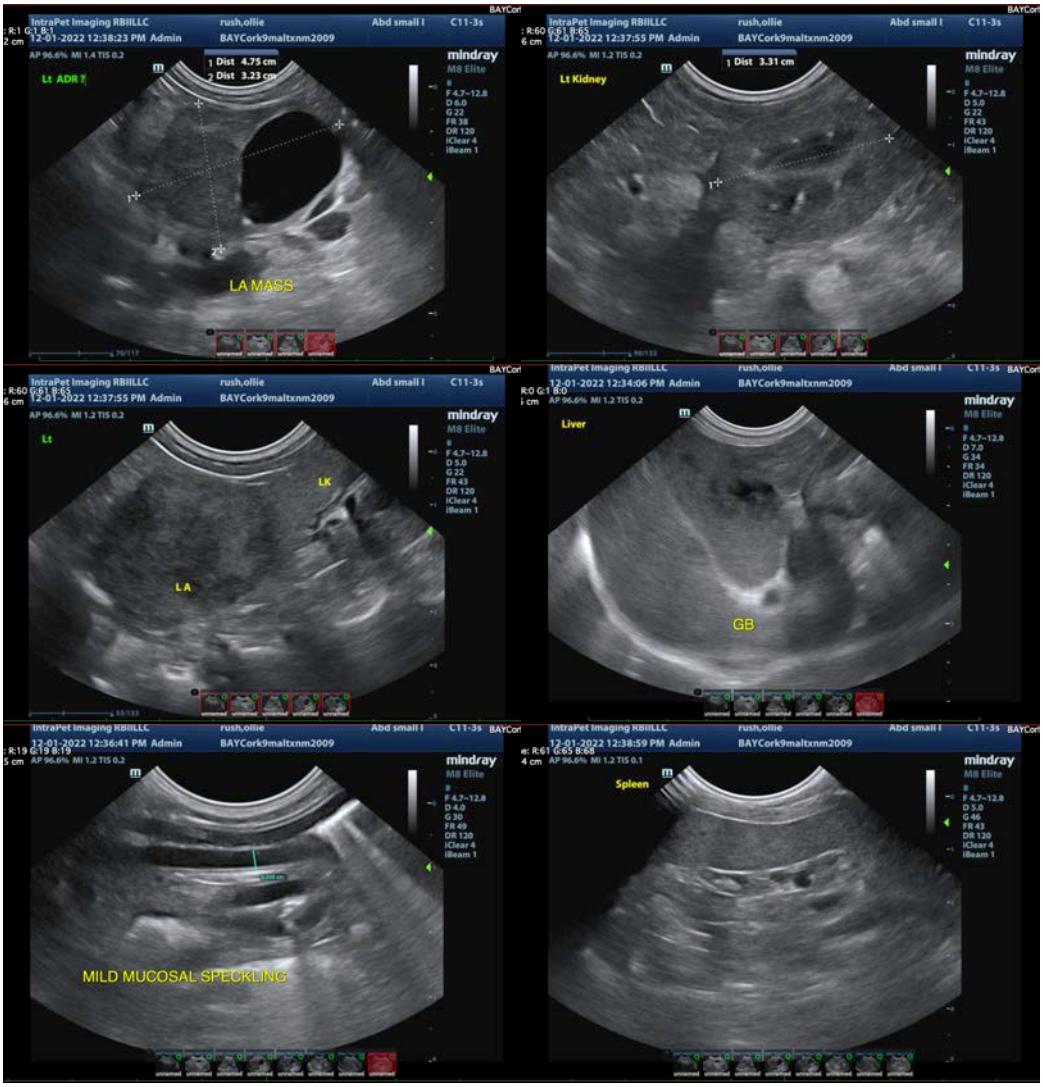
The right adrenal gland additionally has a hyperechoic nodule on the caudal pole. This somewhat complicates adrenal function testing. If a CT scan is performed of the left adrenal, further evaluation of the right adrenal will be possible. This lesion is much less prominent and could be an incidental finding. Continued monitoring is warranted.

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

Both kidneys have decreased corticomedullary distinction and significant pyelectasia. Recommend the aforementioned blood pressure to evaluate for hypertension associated with primary renal disease. Additionally, recommend a urinalysis and culture to look for evidence of pyelonephritis.

The liver is large and heterogeneous. This is a non-specific finding and is likely of limited significance at this time. The gallbladder has a large amount of debris, but no wall thickening and no surrounding inflammation. Recommend starting chronic Ursodiol therapy and monitoring the gallbladder with ultrasound and bloodwork for possible progression.





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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