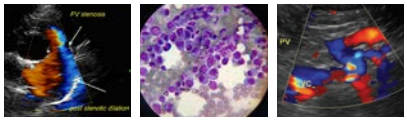
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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DATE

4/4/23

PATIENT

Magda Diliello

SPECIES

Canine

BREED

Pit Bull X

SEX

Spayed Female

AGE

6/15/12

WEIGHT

41.3 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Timonium AH

REFERRING VET

Dr. McMichael

INVOICE

46380

PRESENTING CLINICAL SIGNS

Hx PU/PD- increased panting x ~3 months. Hx urinary incontinence, managed with Proin.

Current Medications: Proin 25mg SID.
Lab Results: Dec 2022: CBC. Chem. T4 WNL. UA- 1.005, inactive sediment.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, BS, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall largely appears of normal thickness with very slight irregularity. The region of the trigone, ureteral papillae and proximal urethra appear free of any calculi or mass lesions. There is a large, irregular, hypoechoic mass effect visualized towards the apex of the urinary bladder, measuring 3.3 cm x 2.4 cm. This lesion appears submucosal or possibly extraluminal.

The left kidney has a normal shape and size (7.02 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 a 1.25 cm cortical cyst noted. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.88 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large and irregular, measuring 0.98 cm at the cranial pole, 1.69 cm at the caudal pole, and 3.36 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 large and heterogeneous. The cranial pole appears somewhat hyperechoic and there is some irregularity and concern for vascular invasion noted. Findings are most consistent with a left adrenal mass.

The right adrenal gland is normal in size measuring 0.90 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, 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 right-sided cystic structure visualized within the parenchyma measuring 3.2 cm x 3.99 cm.

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 a large amount of gas and fluid/ingesta. 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.

PRIMARY FINDINGS

- Irregular hypoechoic mass effect visualized at the apex of the urinary bladder – This does not have the typical appearance of a transitional cell carcinoma, as it appears submucosal, possibly extraluminal. Recommend a fine needle aspirate of this mass lesion and a urinalysis and culture.

- Large, irregular left adrenal gland with possible vascular invasion – Findings are most consistent with a left adrenal tumor. Differentials would include carcinoma, pheochromocytoma, adenoma, hyperplasia, other.

SECONDARY FINDINGS

- Cystic structure visualized in the cortex of the left kidney – most consistent with a benign renal cyst.

- Cystic hepatic lesion – most consistent with a benign hepatic cyst.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The left adrenal is large and irregular, most consistent with a mass effect. Additionally, there is some irregularity that is concerning for possible vascular invasion, but this is not definitive. These masses can be benign or malignant and can secrete hormones or be non-active. Based on the irregular appearance of this mass, a cancerous process is considered most likely. Options moving forward include:

- 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

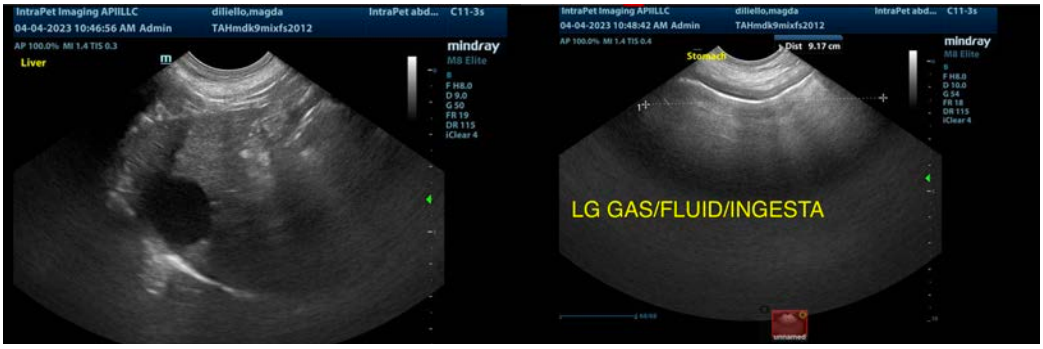
- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.

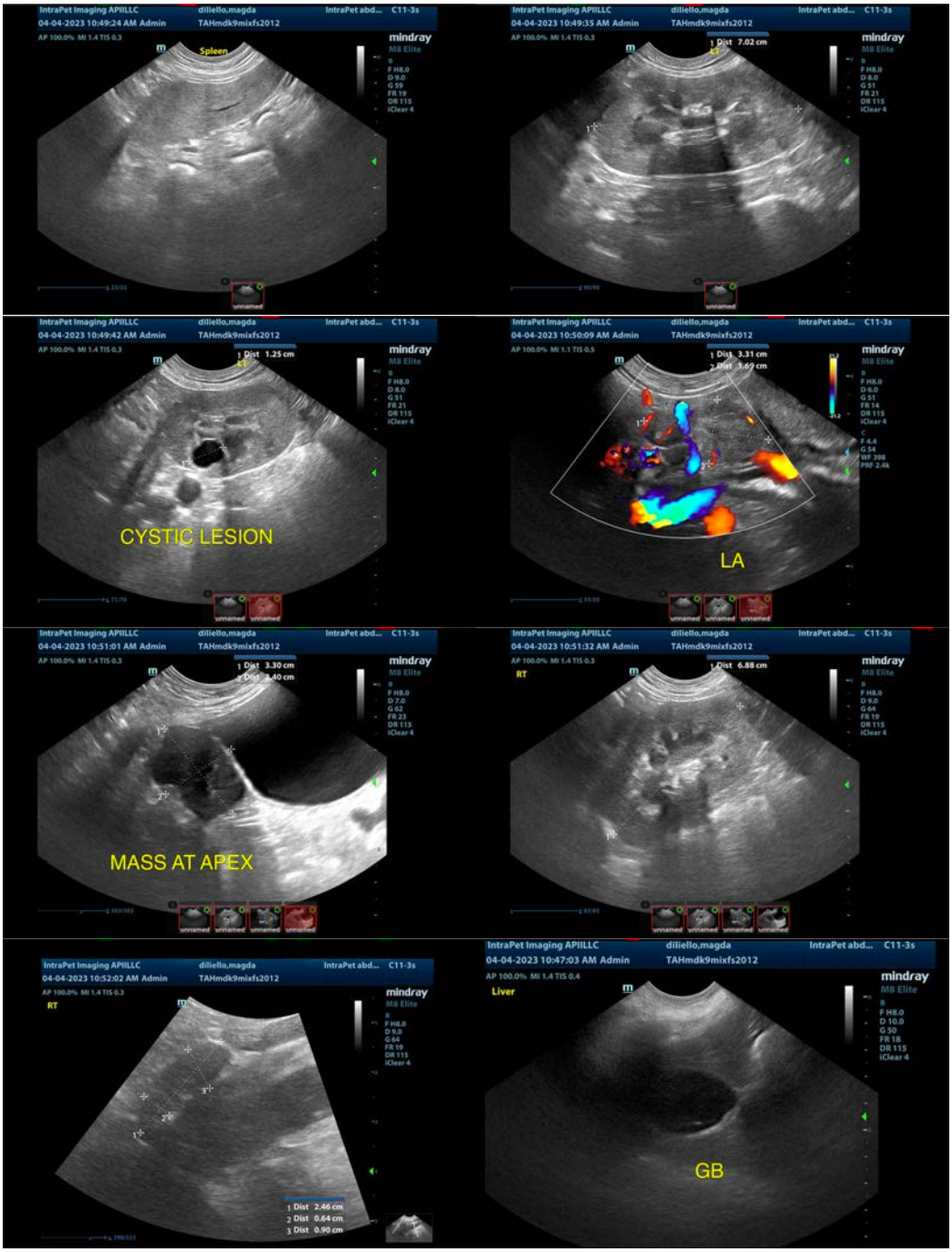
- If no symptoms of cushings are present, consider either referral for surgery or if surgery is not an option consultation with a veterinary oncologist regarding chemotherapeutic options and continued monitoring with ultrasound (in 4-6 weeks) can be considered.

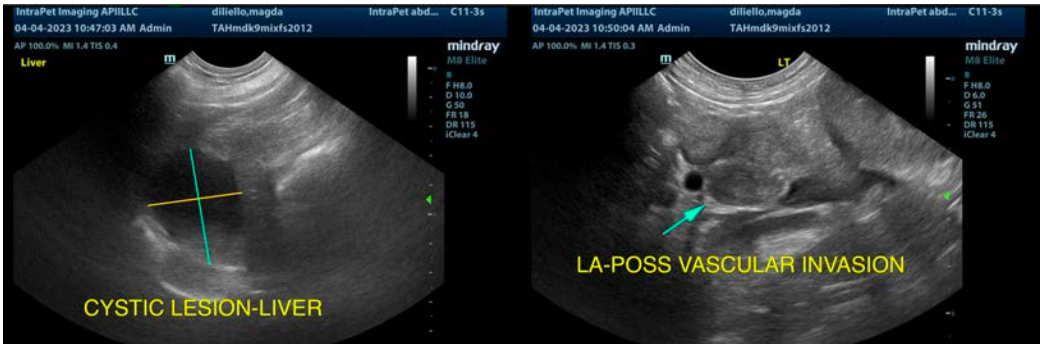
- Some aggressive adrenal tumors can grow quickly and there is risk for acute hemorrhage from vascular invasion.

I suspect this is the source of the PU/PD described.

There is an irregular hypoechoic mass lesion visualized at the apex of the urinary bladder. This is an atypical location and appearance for transitional cell carcinoma, although this cannot be ruled out. Additionally, the mucosa appears relatively intact. This lesion could be submucosal or extramural. I would consider a fine needle aspirate of this lesion, but there is some concern for possible tracking of atypical cells. I'm concerned that a luminal approach to the lesion (cystoscopy, traumatic catheterization, etc.) may not be diagnostic due to the non-mucocele nature of the lesion. Additionally, a surgical biopsy could be considered. Differentials could include a transitional cell carcinoma, leiomyoma, leiomyosarcoma, lymphoma, granuloma, adhered abdominal mass, etc. It is unknown if this could be contributing to the incontinence noted. Consider a urinalysis and culture.




Spleen
CYSTIC LESION
LA
MASS AT APEX
GB



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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