IMAGING PERFORMED BY

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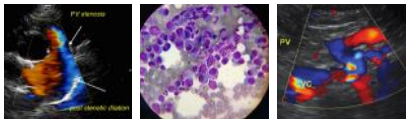

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DATE
8/2/22

PATIENT
Georgia Brainard

SPECIES
Canine

BREED
Maltese

SEX
Spayed Female

AGE
11/25/05

WEIGHT
6.8 Pounds

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

HOSPITAL NAME
Chadwell AH

REFERRING VET
Dr. Gold

INVOICE
16674

PRESENTING CLINICAL SIGNS

History: Hematuria/cystitis

Current Medications: Clavamox 62.5mg BID started 7/23, Proin 25mg ¼ BID started 7/23.
Radiographs: No radiopaque stones.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Valium.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The bladder wall largely appears of normal thickness but there is a large, slightly irregular vascular soft tissue mass effect visualized within the trigone, extending into the cystourethral junction and proximal urethra, measuring approximately 4.43 cm x 1.3 cm. These findings are concerning for a bladder mass.

The left kidney has a normal shape and size (2.97 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.51 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.59 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.53 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. There is a small hyperechoic nodule, visualized within the spleen, measuring 0.4 cm x 0.27 cm, this does not deform the splenic capsule.

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. There is an ill-defined hypoechoic nodule visualized within the hepatic parenchyma, measuring 1.81 cm x 0.62 cm. Additionally, there is a small cystic lesions, measuring 0.73 cm in diameter.

The gall bladder lumen is significantly distended with a large volume of echogenic debris and some mineralized material/small stones. Some of this material appears to be clinging to the gallbladder wall and is starting to organize. These findings are most consistent with an early gallbladder 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 0.3-0.5 cm in wall thickness) and the jejunum measured as normal (0.31 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 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.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Large soft tissue mass effect involving the trigone region and cystourethral junction. Findings are concerning for a possible transitional cell carcinoma. Recommend a traumatic catheterization with cytology.

- Small hyperechoic nodule in the spleen. This could represent a benign or neoplastic process. This does not deform the splenic capsule, which trends towards a more benign lesion.

- Heterogeneous liver with ill-defined hypoechoic nodule and a small cyst. 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 appearance of this lesion trends towards a more benign lesion but an underlying neoplastic process cannot be ruled out.

- Early gallbladder mucocele. There is no obvious surrounding inflammation at this time. Recommend close monitoring and medical therapy.

Secondary Findings

- Decreased corticomedullary distinction in both kidneys. The bilateral renal findings are consistent with age-related change.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The focal mass in the bladder has characteristics most consistent with a neoplastic lesion, but polyps and inflammatory lesions can sometimes have a similar appearance. A definitive diagnosis cannot be determined by ultrasound alone.

- Recommend cytologic analysis of a traumatic catheterization sample or a highly cellular free catch urine sample.

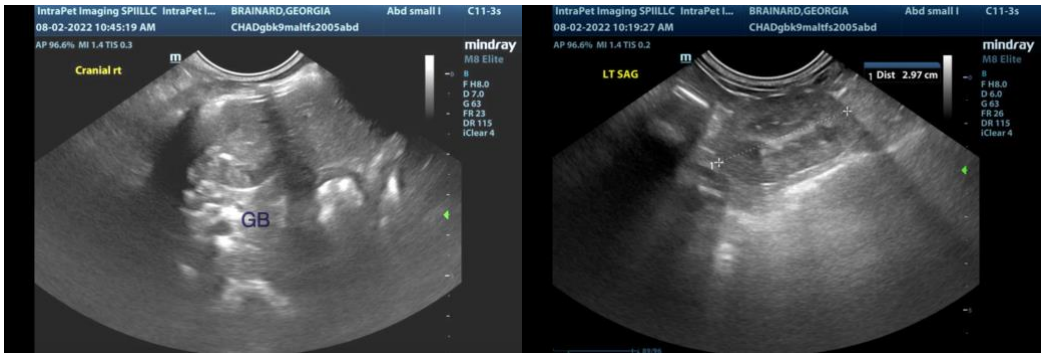
- Recommend urinalysis and culture

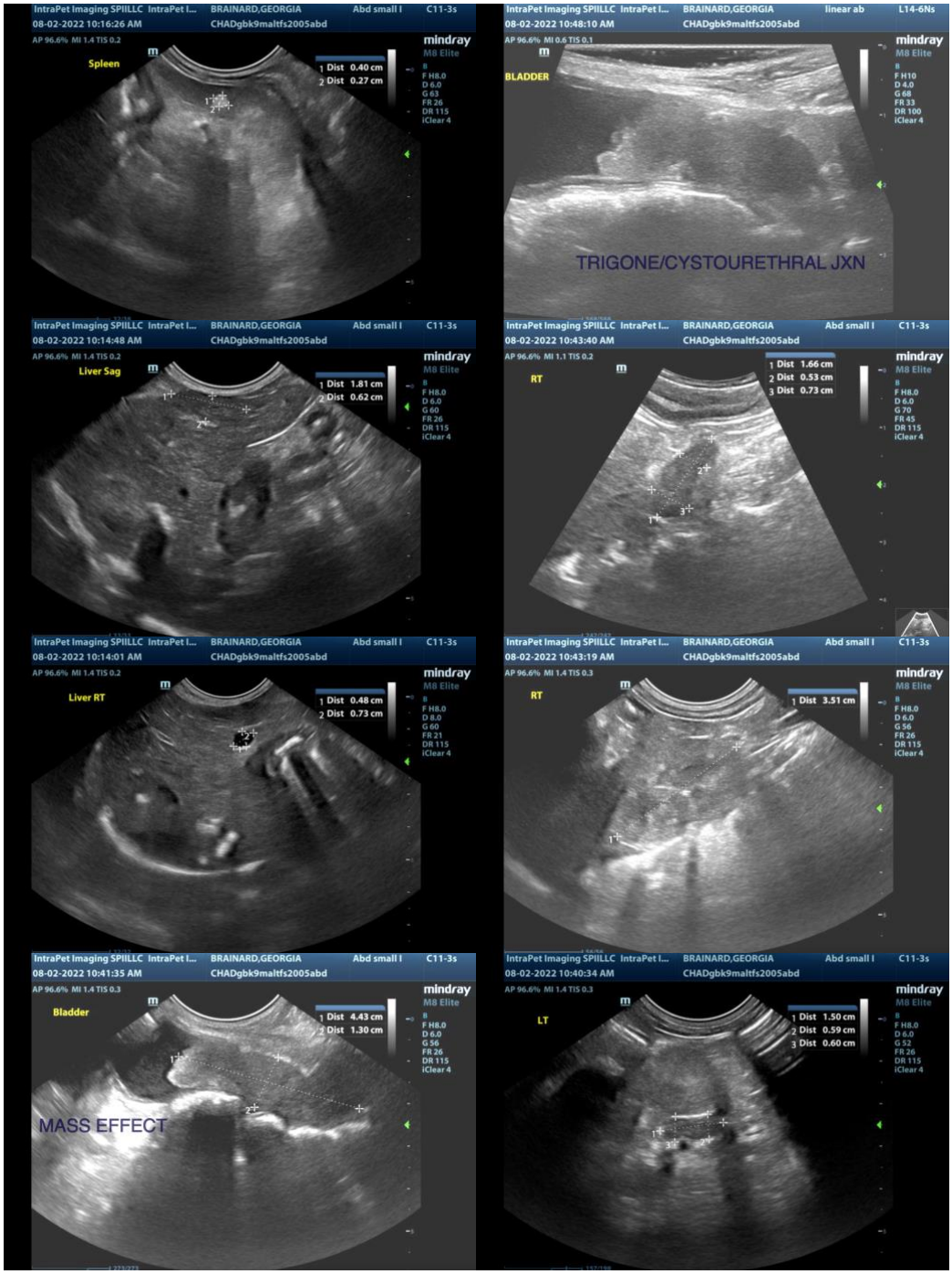
- Additionally, a urine BRAF mutation test can further evaluate for a transitional cell carcinoma. A positive test is diagnostic A negative test is inconclusive and will need further diagnostics.

- If a transitional cell carcinoma is confirmed, consider a referral to/consultation with a board-certified veterinary oncologist for recommendations regarding treatment options and prognosis. If a diagnosis cannot be obtained based on the above recommendations, consider cystoscopy.

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

The gallbladder appears distended with early organization of intraluminal material. These findings are most consistent with an early gallbladder mucocele. If liver enzyme elevations are present, consider ursodiol therapy and continued monitoring with ultrasound for possible progression of this lesion.





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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