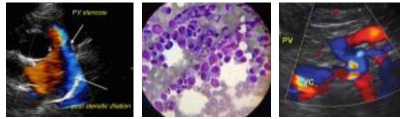


DATE
10/3/22

PATIENT
Bugsy Beckman

SPECIES
Canine

BREED
Shih Tzu

SEX
Neutered Male

AGE
12/10/15

WEIGHT
20.6 Pounds

INTERPRETED BY
Beth Johnson, DVM
DACVIM

HOSPITAL NAME
Everhart WellPet

REFERRING VET
Dr. Goodman

INVOICE
17583

PRESENTING CLINICAL SIGNS

History: Pt presented in June for lameness, diagnosed with CCL tear. Pre op surgery labs showed ALP >1100. Pt seems more anxious.

Current Medications: Carprofen PRN.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System
Urinary bladder is adequately distended with anechoic contents. No masses or inflammatory changes are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface. Several small cystoliths are present at the cystourethral junction and in the proximal preprostatic urethra, the largest of which measures approximately 0.32 cm in diameter.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted bilaterally. The left kidney measures 6.65 cm. The right kidney measures 5.37 cm. Both kidneys contain multiple (too numerous to count) cystic lesions throughout the cortices, the lesions are varying sizes and some appear septated in nature.

Adrenal Glands
Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left adrenal gland measures 2.86 cm long x 0.86 cm at the cranial pole and 1.45 cm at the caudal pole. The right adrenal gland measures 3.1 cm long x 1.53 cm at the cranial pole and 0.64 cm at the caudal pole. A hyperechoic nodule is noted in the caudal pole of the left adrenal gland, and the cranial pole of the right adrenal gland. Nodule does not disrupt normal shape and/or architecture.

Spleen
Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver
Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. A focal mucosal thickening is noted, measuring approximately 1.0 cm x 2.0 cm in size. The thickening is homogeneous and isoechoic in

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- A focal gastric mucosal thickening, rule outs for which include benign inflammatory change, potentially secondary to ulcer, given this patient's carprofen history versus other benign infiltration, such as a polyp, however, malignant disease, such as a carcinoma is also possible, but is less likely.

- Bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.

  * Hyperechoic adrenal nodule in the caudal pole of the left adrenal and cranial pole of the right adrenal – Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored.

- Hyperechoic hepatomegaly– This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.

- Bilateral age-related kidney changes with bilateral dystrophic mineralization and multiple bilateral cortical cystic lesions of varying sizes, some of which are septated, the top differential for which includes benign cortical cysts. Complicated cysts or even abscesses or hematomas can't be ruled out given the septations. Infiltrative neoplastic nodules are also possible but considered less likely.

Secondary Findings

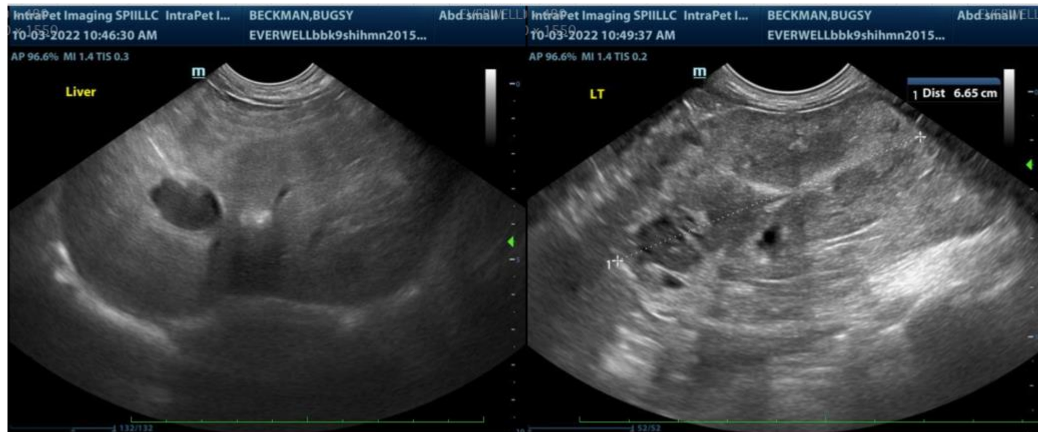
- Urinary bladder cystoliths

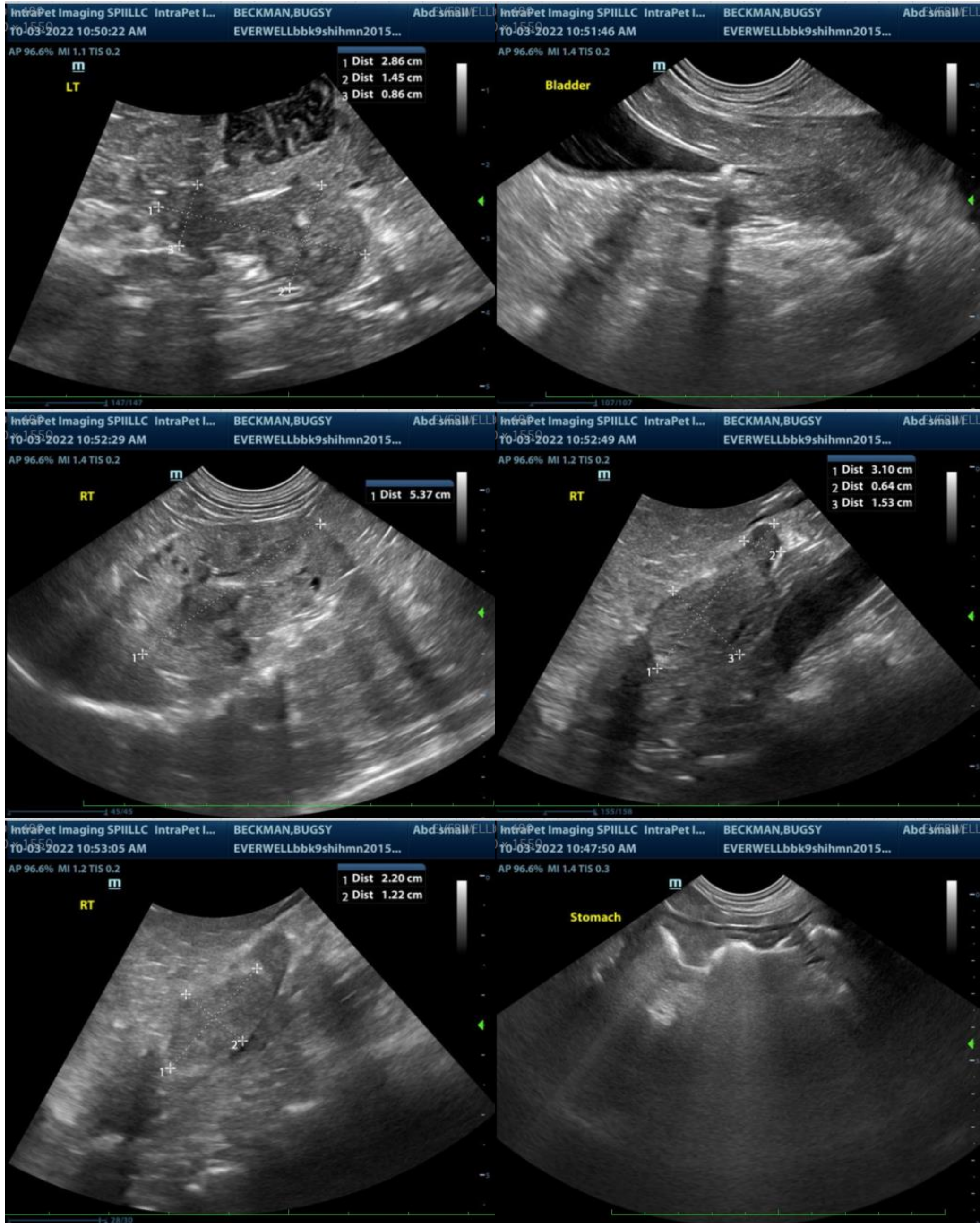
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, etc. are present, testing for hyperadrenocorticism with a low dose dexamethasone suppression test is warranted, given the adrenal gland changes noted in these images. If clinical signs are not present, monitoring is recommended for now with testing pursued when and if clinical signs develop. Regardless of clinical signs, however, urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended. A blood pressure is recommended if not recently evaluated.

Recommendations to address the gastric lesion include either discontinuation of nonsteroidal therapy if possible and empirical management of possible microulceration with twice per day Omeprazole and Sucralfate, as well as empirical deworming with a 5-day course of Panacur, followed by a recheck of the gastric lesion, at which time, if still present, either a fine needle aspirate or an endoscopic biopsy could be considered. Alternatively, if a more aggressive approach is elected sooner, a fine needle aspirate or endoscopic biopsy could be considered immediately.

Given the size in these images, the patients cystoliths may be able to pass on their own, however, they could results in obstruction and close education about what to watch for and monitoring is recommended so that obstruction is caught in a timely fashion should it occur. A fine needle aspirate of the kidneys could be considered if patients coagulation status is appropriate, however, the appearance of the cystic lesion trends towards the benign, so periodic ultrasonographic monitoring is a reasonable less invasive alternative, especially given the lack of clinical signs, kidney pain, azotemia, etc. reported.

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AP 96.6% MI 1.1 TIS 0.2
LT
1 Dist 2.86 cm
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Bladder
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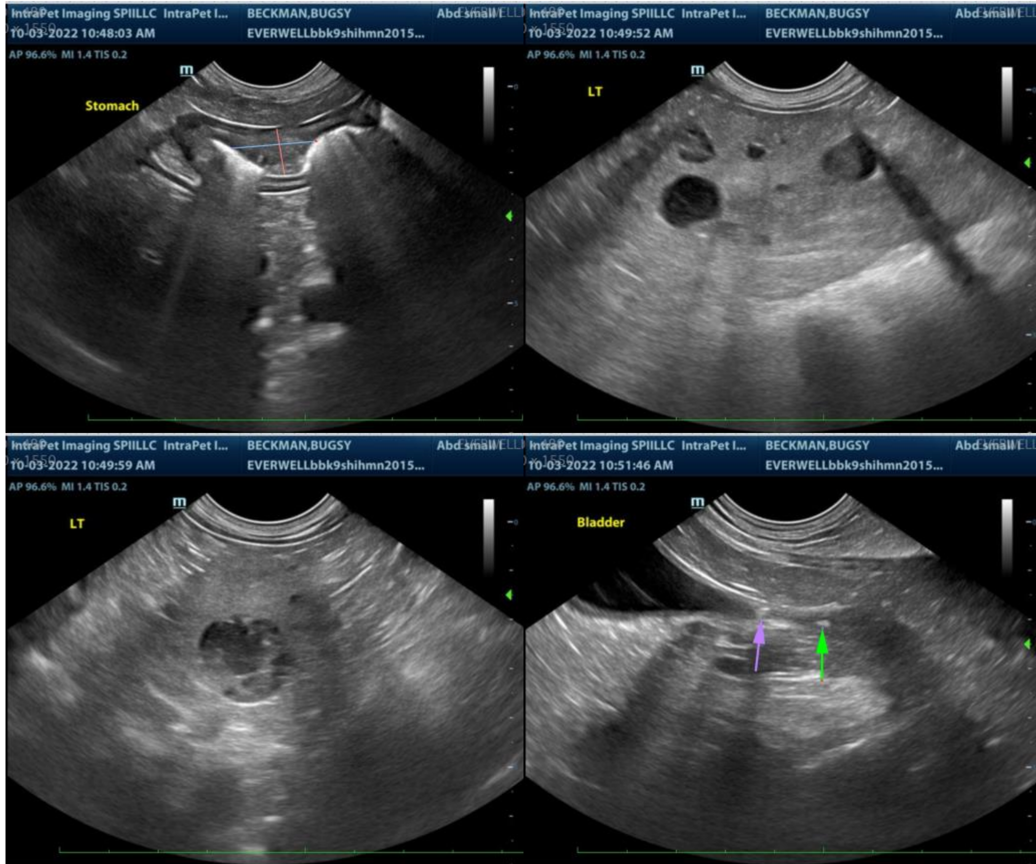
Stomach



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.

Beth Johnson, DVM DACVIM
Beth.Johnson@SonoPath.com