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Clinical Sonography & Telecytology
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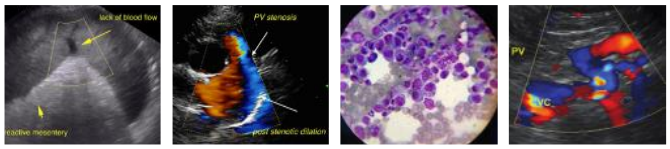


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Gizmo Jones

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Neutered Male

AGE

14 Years

WEIGHT

16.9 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Amy Mayhew, LVT

HOSPITAL NAME

Dr. Alex Schechter

REFERRING VET

SVS Imaging MI

INVOICE

20743

DATE

1/23/23

PRESENTING CLINICAL SIGNS

History: PU/PD chronic x1year, hypertensive x1 year managing with Amlodipine 3.75mg. reluctant to eat x4 days

Abnormal PE/Chem/CBC/UA Results: III-VI heart murmur, monitored with cardio x2 years stable 3 months ago. elevated BUN 35 SDMA 16

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

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 mineral or infarcts observed. The left kidney measures 4.89 cm. The right kidney measures 4.97 cm. Pyelectasia is noted in the right kidney, measuring 0.29 cm in the transverse view.

Adrenal Glands

Adrenal glands are mildly 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 0.51 cm at cranial pole and 0.63 cm at caudal pole. The right adrenal gland measures 1.04 cm at cranial pole and 0.46 cm at caudal pole.

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.

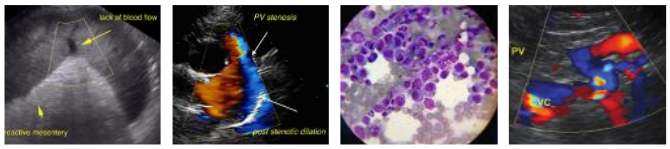
Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

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. Pyloric outflow tract appears patent.



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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. The medial iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Emerging mucocele – Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.

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

- Heterogenous Liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

- Reactive medial iliac lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

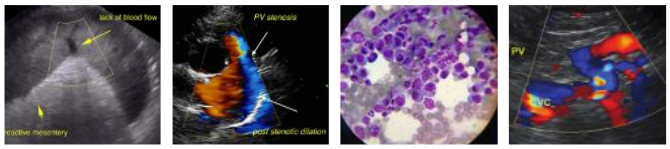
Secondary Findings

- Age-related kidney changes with mild right pyelectasia- Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patients reported PU/PD, mild azotemia, hypertension, the mild pyelectasia in these images etc., if not recently evaluated, 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.

The pathology described above, involving the liver, the gallbladder, the mild adrenomegaly, could all be



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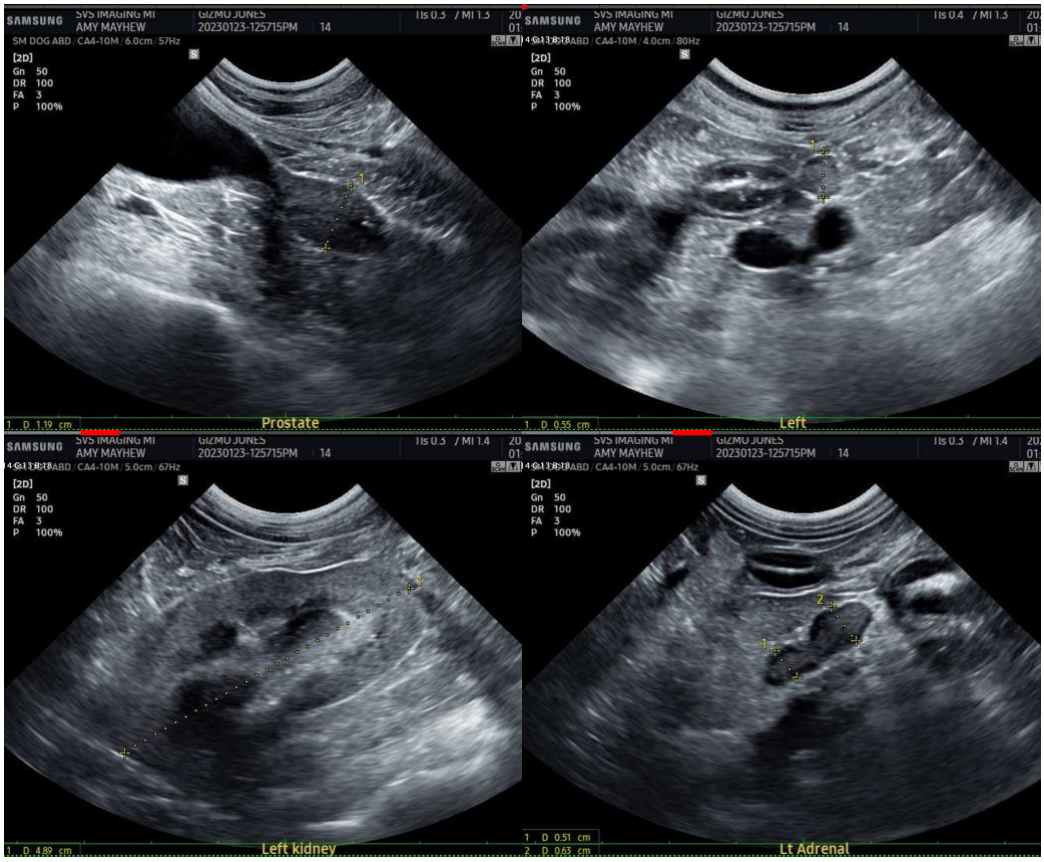
suggestive of underlying hyperadrenocorticism, as a potential contributing factor to this patients PU/PD, however, hyperadrenocorticism does not typically result in a decreased appetite, which is concerning that there is another underlying disease that should be evaluated prior to pursuing hyperadrenocorticism, as concurrent illness can result in false positive diagnosis of hyperadrenocorticism.

Given the appearance of this patients gallbladder, an emerging mucocele could be the cause of the reduced appetite. If blood work changes/liver enzymes and/or physical exam findings, including especially cranial abdominal pain, are present, a more aggressive approach than medical management, up to/and including a possible cholecystectomy may be warranted. However, without supporting clinical signs, medical management with hepatic nutraceuticals, including Ursodiol +/- broad spectrum antibiotics could be considered as a less aggressive approach.

Additionally, especially if the urinalysis supports renal vs prerenal azotemia, testing for Leptospirosis is recommended.



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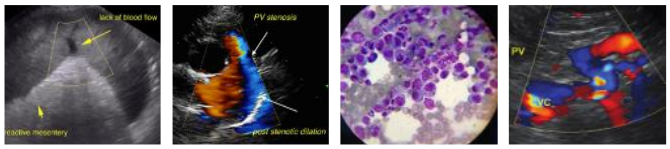

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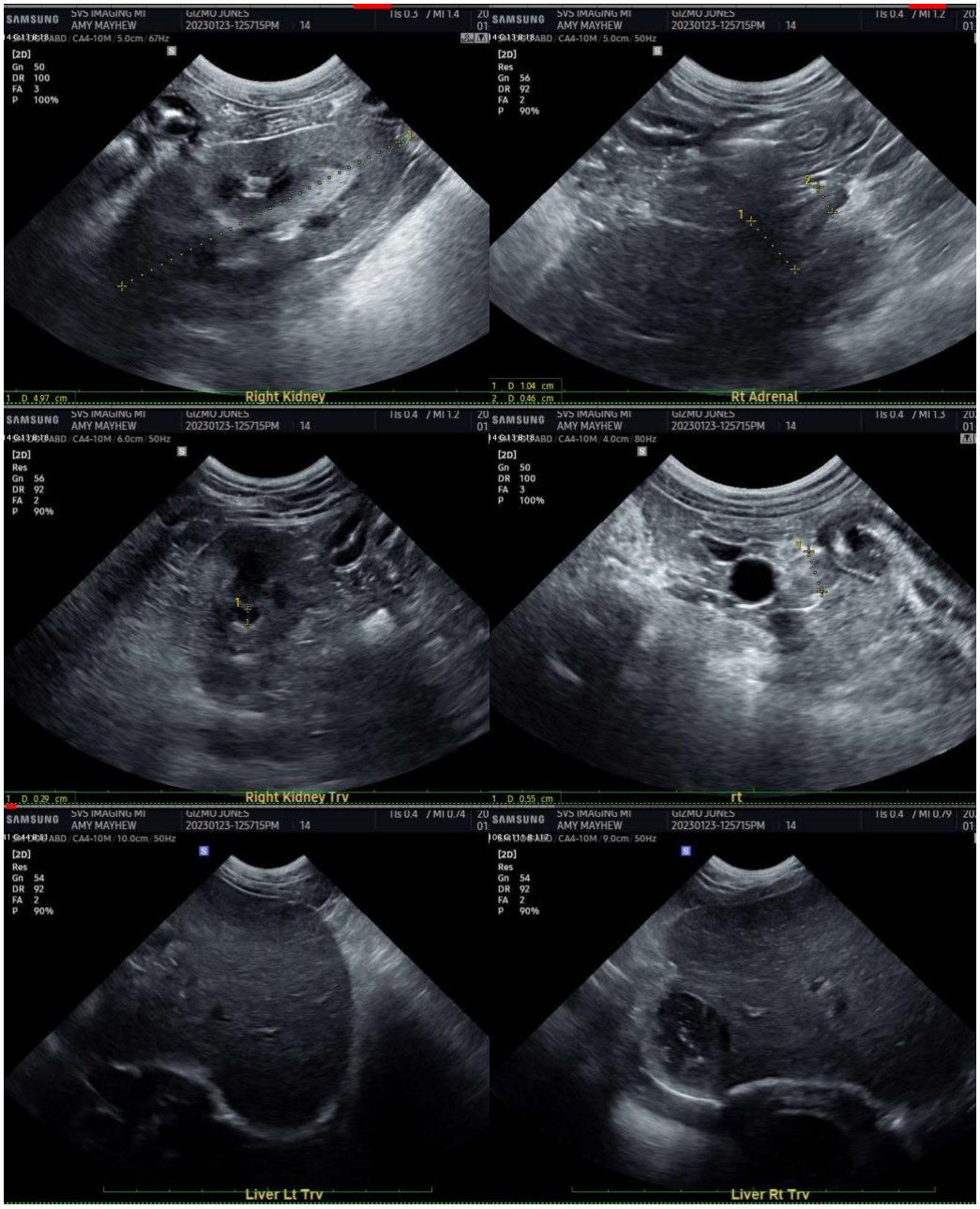

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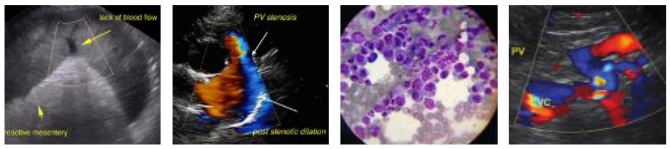

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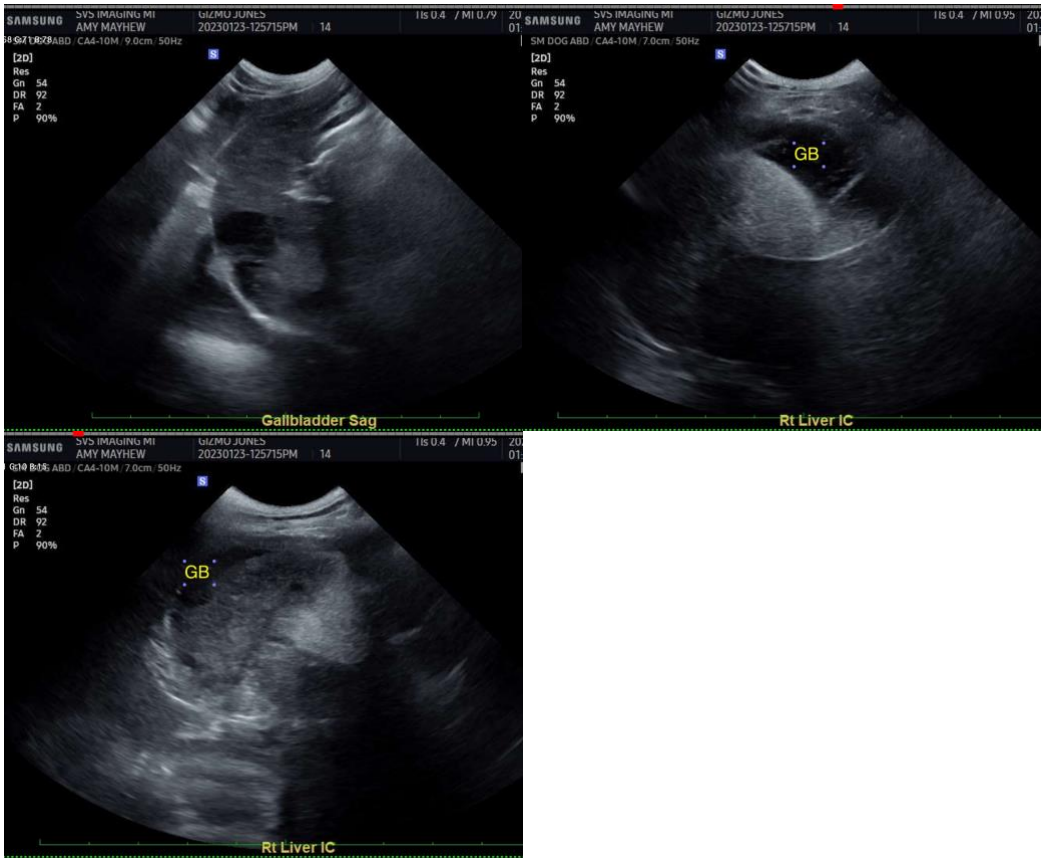

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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