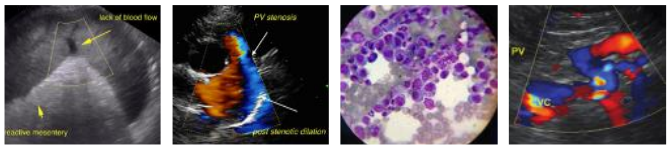
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Gaudi Castro

SPECIES

Canine

BREED

Yorkshire Terrier Mix

SEX

Neutered Male

AGE

11 Years

WEIGHT

17 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Megan Cassels-Conway

HOSPITAL NAME

Central Broward AH

REFERRING VET

Dr. Megan Cassels-Conway

INVOICE

21633

DATE

3/13/23

PRESENTING CLINICAL SIGNS

History: Recheck of functional left adrenal mass diagnosed 6/2021. Has been untreated as was asymptomatic at the time. Recent panting and restlessness particularly in evening. Polyphagia, PU/PD. Painful on palpation of abdomen during exam which O had noted at home as well (particularly right cranial during ultrasound). Elevated liver enzymes, chol, TG with 12 hour fast, Proteinuria. Grade 3/6 chronic L systolic murmur.

Abnormal PE/Chem/CBC/UA Results: 3/11/23 CBC WNL Chem: TP 8.3, Glob 4.0, ALT 247, ALP 598, TBili 0.4, BUN 45, Ca 12.5, Chol 364, TG 670, PSL 203 T4 WNL UA: 1.033, 3+ protein BP avg 180/110 MAP 122, HR 134 8/22/22 CBC: WNL CHEM: Total protein 8.4, ALb 4.5 GLob 3.9, AST 228, ALT 323, ALP 772, TBili 0.8, BUN 34, Ca 11.6, Chol 408, PSL 290, CPK 5466 T4: WNL U/A: 1.022, pH 8, 2+ protein 6/20/21 Adrenal panel ACTH stim: Pre: 10.7 H Post: 20.6 H Androstenedione Pre 9.9 H Post >10 H Estradiol WNL, upper end Progesterone Pre 1.11 H Post WNL 17 OH Progesterone Pre 1.78 H Post 3.84 H Testosterone <15 WNL

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick. Mucosa is hyperechoic and irregular. No masses ore observed. Small punctate cystoliths are present. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

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. The left kidney measures 4.68 cm. The right kidney measures 4.7 cm. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted bilaterally.

Adrenal Glands

The left adrenal gland is enlarged (3.06 cm long x 2.18 cm thick), with mild heterogenous parenchymal changes. Swollen capsular expansion is noted without evident capsular escape or vascular invasion.

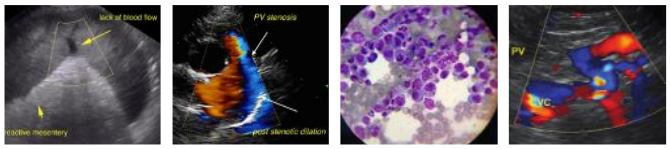
Right adrenal gland is small in size (flattened contour), measuring 0.72 cm at the cranial pole and 0.38 cm at the caudal pole. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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.



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Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

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

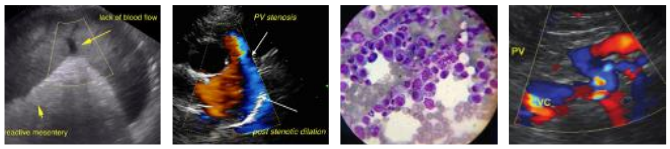
Primary Findings

- A left adrenal mass with a flat right adrenal gland is most consistent with a functional adrenal tumor, such as an adenoma or less likely an adenocarcinoma. A pheochromocytoma can't be ruled out but is considered less likely given the flat right adrenal gland.
- 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.
- Mild gallbladder debris- 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. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

Secondary Findings

- Small punctate urinary bladder cystoliths
- Age-related kidney changes with nonobstructive dystrophic mineralization bilaterally

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS



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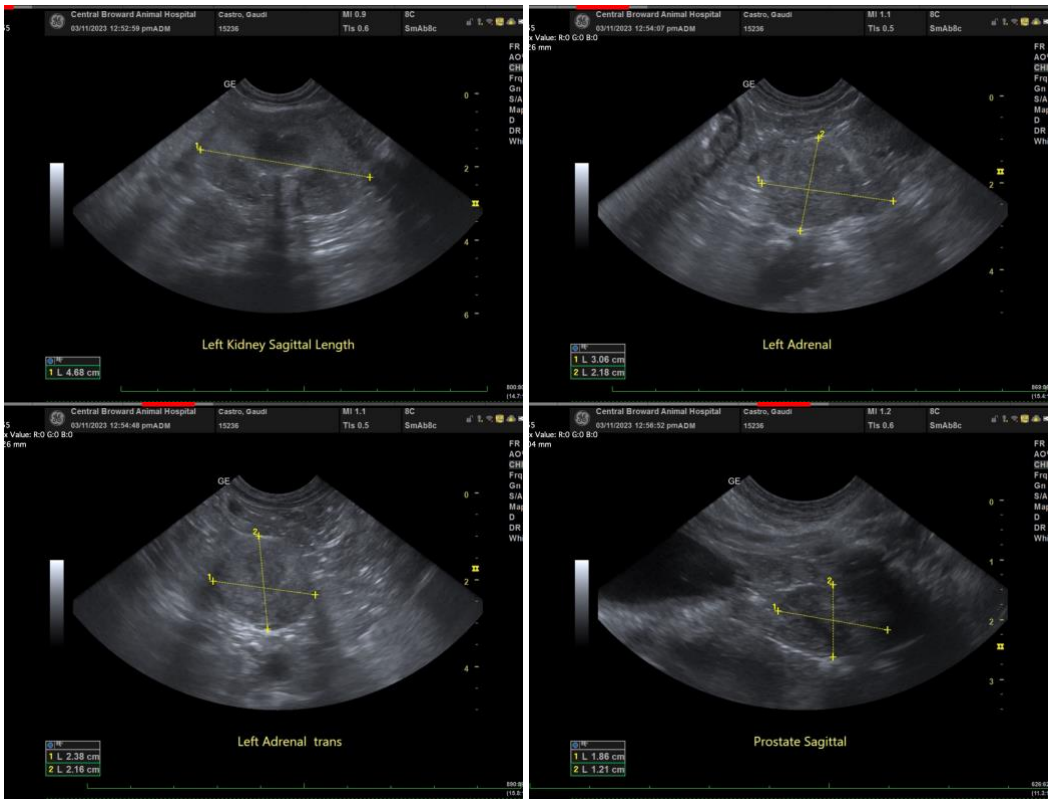
Ideally, a more definitive differentiation test, such as a low dose or high dose dexamethasone suppression test, or endogenous ACTH would be evaluated to confirm a functional adrenal tumor, however, given the previous positive ACTH stimulation test and ultrasound findings, if further diagnostics are not pursued, treatment is still appropriate. The recommended treatment of choice for a functional adrenal tumor is an adrenalectomy, in which case a presurgical planning abdominal CT scan is recommended, or if medical management is elected, options include either trilostane or mitotane.

Typically, both proteinuria and hypertension (if present) should be treated as well as treating the hyperadrenocorticism specifically, however, given this patients mild hypertension, combined with the anxious nature of the patient, whether or not to trust, and therefore treat that mildly high blood pressure now vs treating the hyperadrenocorticism and monitoring, is based on clinicians impression as to whether or not the hypertension was real vs anxiety, white coat, etc.

If treatment is not pursued, it is important to monitor both the hypertension and the proteinuria very closely, so that treatment (in the form of Ace-inhibitor, amlodipine, etc., pending values) can be initiated if they persist.



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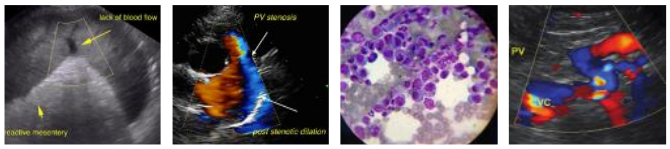

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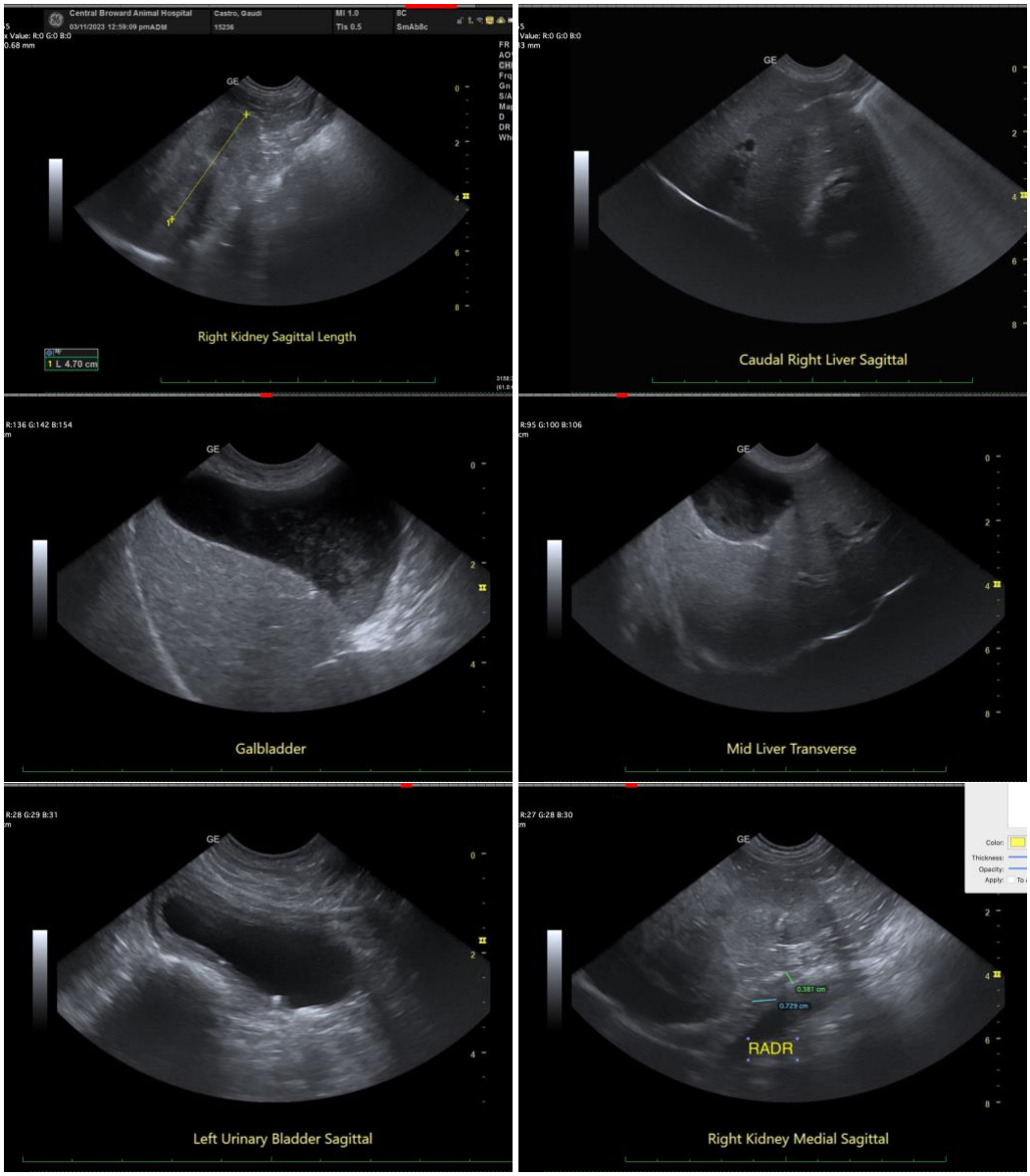

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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