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Clinical Sonography & Telecytology
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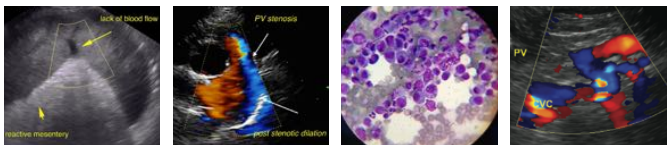

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Maggie Wlech

SPECIES
Canine

BREED
Cockapoo

SEX
Spayed female

AGE
15 years

WEIGHT
19.3 lbs

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Jessica Miller, RDMS

HOSPITAL NAME
Summit Dog and Cat Hospital

REFERRING VET
Dr. Vogler

INVOICE
39929

DATE
10/5/22

PRESENTING CLINICAL SIGNS

History: Intermittent bile vomiting and decreased appetite.
Abnormal PE/Chem/CBC/UA Results: ALKP 160, ALT 148, BUN/Urea 32, Trig 305, PLT 546, T4 <0.5

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.

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, mineral or infarcts observed. The left kidney measured 4.2 cm and the right kidney measured 4.29 cm.

Adrenal Glands

The Left adrenal gland is enlarged (2.6 cm long, 1.4 cm at the cranial pole and 0.69 cm at the caudal pole) with mild heterogenous parenchymal changes. Swollen capsular expansion is noted without evident capsular escape or vascular invasion.

The right adrenal gland is enlarged (2.6 cm long, 1.9 cm at the cranial pole and 0.7 cm at the caudal pole) with mild heterogenous parenchymal changes. Swollen capsular expansion is noted without evident capsular escape or vascular invasion.

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 (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. A 3.0 cm cystic lesion in the middle of the liver near the gallbladder was noted. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is mildly over 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.

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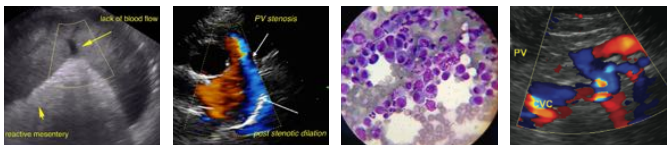

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Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverbation 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 mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) 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 or apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- **Bilateral adrenal masses**, which given the bilateral nature is likely secondary to adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism; however, bilateral adenomas are also possible. Pheochromocytoma and adenocarcinomas cannot be definitively ruled out, but are considered much less likely.
- **Hyperechoic hepatomegaly** with hepatic cysts– 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.
- **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

- **Age related renal changes.**

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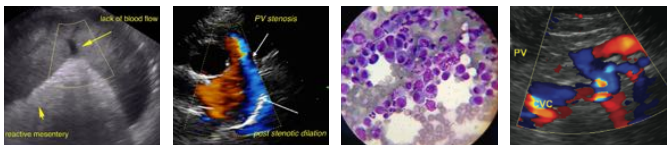

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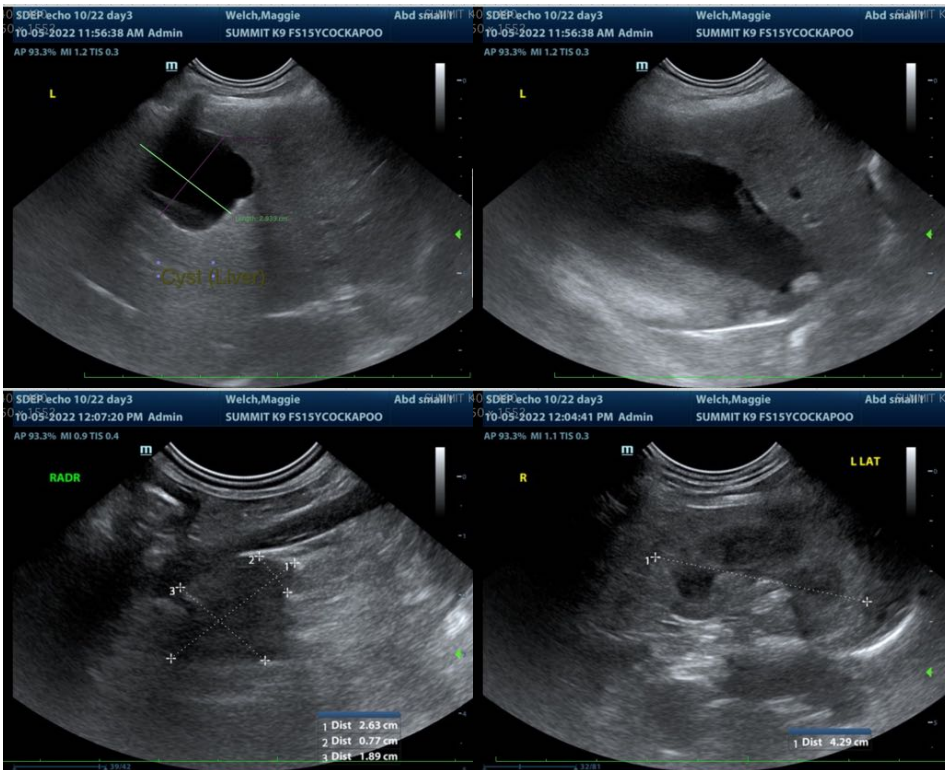
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism. However, hyperadrenocorticism is typically not associated with vomiting, decreased appetite, etc. except in the rare case of a pituitary macroadenoma. To further evaluate comorbidities of hyperadrenocorticism that may result in a patient not feeling well:

- 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.
- Blood pressure is recommended if not recently evaluated.

Otherwise, prior to further diagnosing and/or treating hyperadrenocorticism further evaluation of the gastrointestinal signs is warranted with a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function. Fecal exam is recommended followed by an empirical 5 day course of Panacur for deworming, symptomatic support in the form of anti-emetics, antacids, appetite stimulants, bland easy to digest diet and given the gallbladder debris especially if there is any supporting clinical signs of cholangitis, emerging mucocele, etc. such as cranial abdominal pain, empirical Ursodiol and broad spectrum antibiotics can be considered. If the clinical signs progress and the gallbladder is thought to be playing the primary role, a cholecystectomy can ultimately be necessary. If not and gastrointestinal signs resolve with supportive care and clinical signs of hyperadrenocorticism are present then testing is recommended in the form of a low-dose Dexamethasone suppression test.



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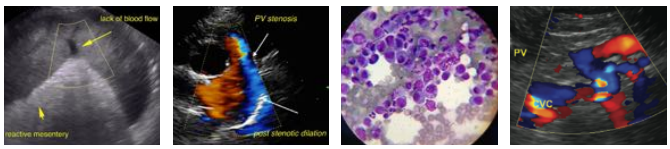

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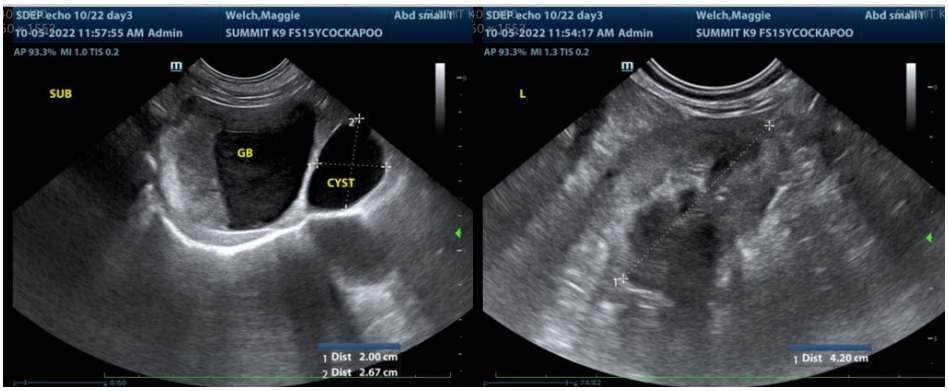

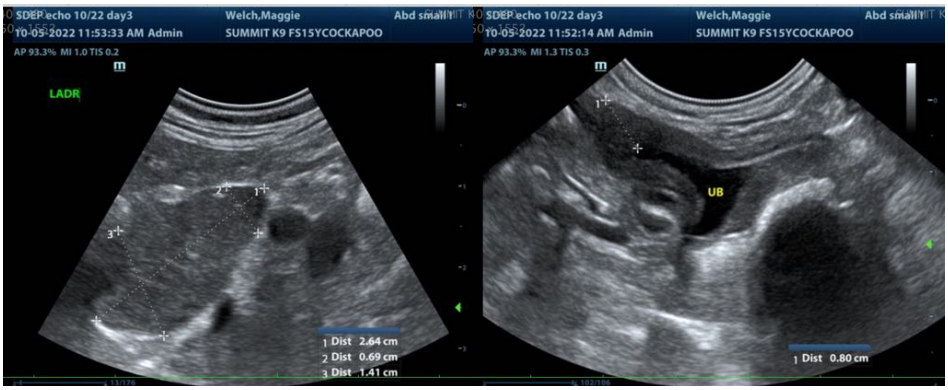

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM DACVIM

Beth.Johnson@SonoPath.com