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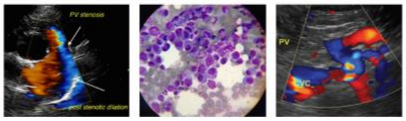
svsimagingqc.net 309-737-3070



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Ruby Crookes

SPECIES

Canine

BREED

Dachshund

SEX

Spayed Female

AGE

14 years

WEIGHT

26.5 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Amy Mayhew LVT

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

Dr. Turenne

INVOICE

12782

DATE

4.17.23

PRESENTING CLINICAL SIGNS

Abnormal PE/Chem/CBC/UA Results: P/R - normal Oral - Grade 3 periodontal disease; poss RL or severe gingivitis upper right PM2 Skin - axillary region (bilateral) - thickened, sl moist Abd palp - normal Increased ALP GI Panel - showed Vitamin B 12 Deficiency; started Cobalaquin orally.

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 (0.43 cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

Left kidney is normal in size (5.55 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal in size (5.51 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

Left adrenal gland is normal in size (0.48 cm at cranial pole and 0.59 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The right adrenal gland is plump/swollen in size (0.99 cm at cranial pole and 0.88 cm at caudal pole). Normal shape and contour are maintained without evidence of capsular invasion. 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). Several small (0.60 to 0.80 cm) hypo to anechoic non-capsule-disrupting nodules are noted throughout the parenchyma. Splenic vasculature appears normal.

Liver

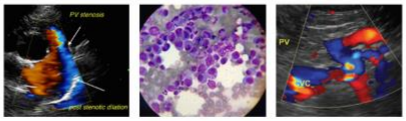
Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. Some sand/mineral debris is also noted. 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 empty with no evidence of obstruction, foreign material or infiltrative disease. 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.



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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

Findings

- Right adrenomegaly most consistent with adrenal hyperplasia secondary to pituitary-dependent hyperadrenocorticism versus stress or potentially, normal patient variant. An adrenal adenoma, or less likely, early pheochromocytoma cannot be definitively ruled out. This finding should be interpreted in combination with clinical signs of hyperadrenocorticism or other adrenal disease.
- 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.
- 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.
- Chronic Cystitis - Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.
- Hypo to anechoic splenic nodules – likely represent benign lesions such as cysts, hematomas, nodular hyperplasia, extramedullary hematopoiesis, etc. However while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's reported chronic diarrhea and hypocobalaminemia, diffuse infiltrative small bowel disease is suspected, and can be present without ultrasonographic abnormalities. Therefore, if a more definitive diagnosis is elected, biopsies of the GI tract via endoscopy should be considered. In the meantime, empirical deworming with a 5-day course of Panacur is recommended, as is a probiotic such as Visbiome or Proviable, and potentially (if tolerated) transition in diet, beginning with a hydrolyzed protein diet. Some patients respond better to one brand of hydrolyzed protein diet versus another, so several trials are often warranted. Cobalamin supplementation should be continued as well.

The described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism. If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc. are present, testing for hyperadrenocorticism with a LDDS test is warranted. If a LDDS

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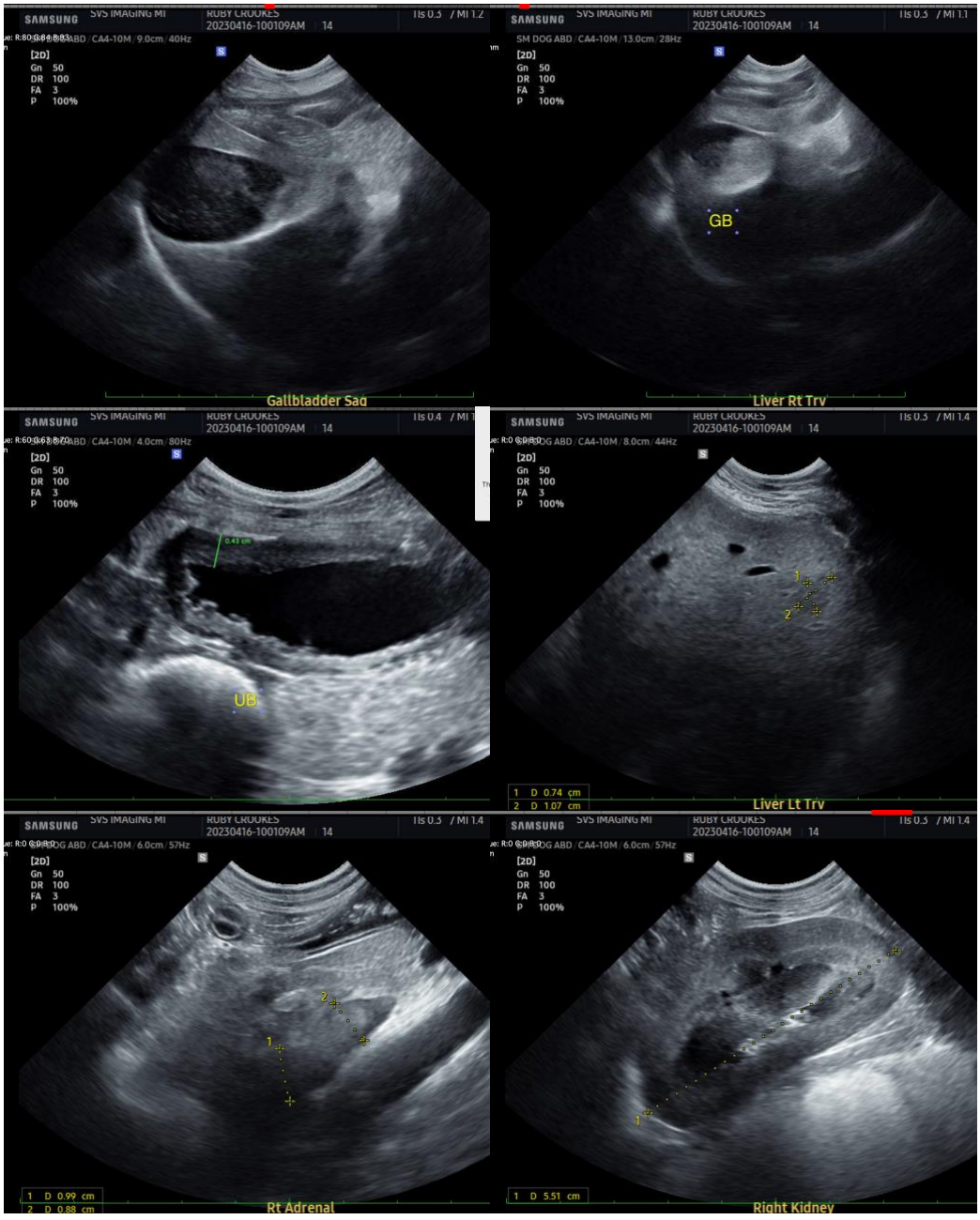
test has been evaluated with a normal result, investigation of possible atypical hyperadrenocorticism with a full ACTH stimulation adrenal panel to the University of Tennessee could be considered.

If clinicals signs are not present, monitoring is recommended with testing pursued when/if clinical signs develop. If not recently evaluated, blood pressure is recommended.

If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are also recommended. If protein is present in an otherwise.



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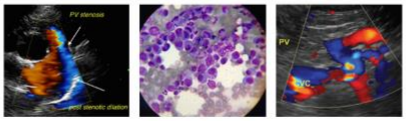

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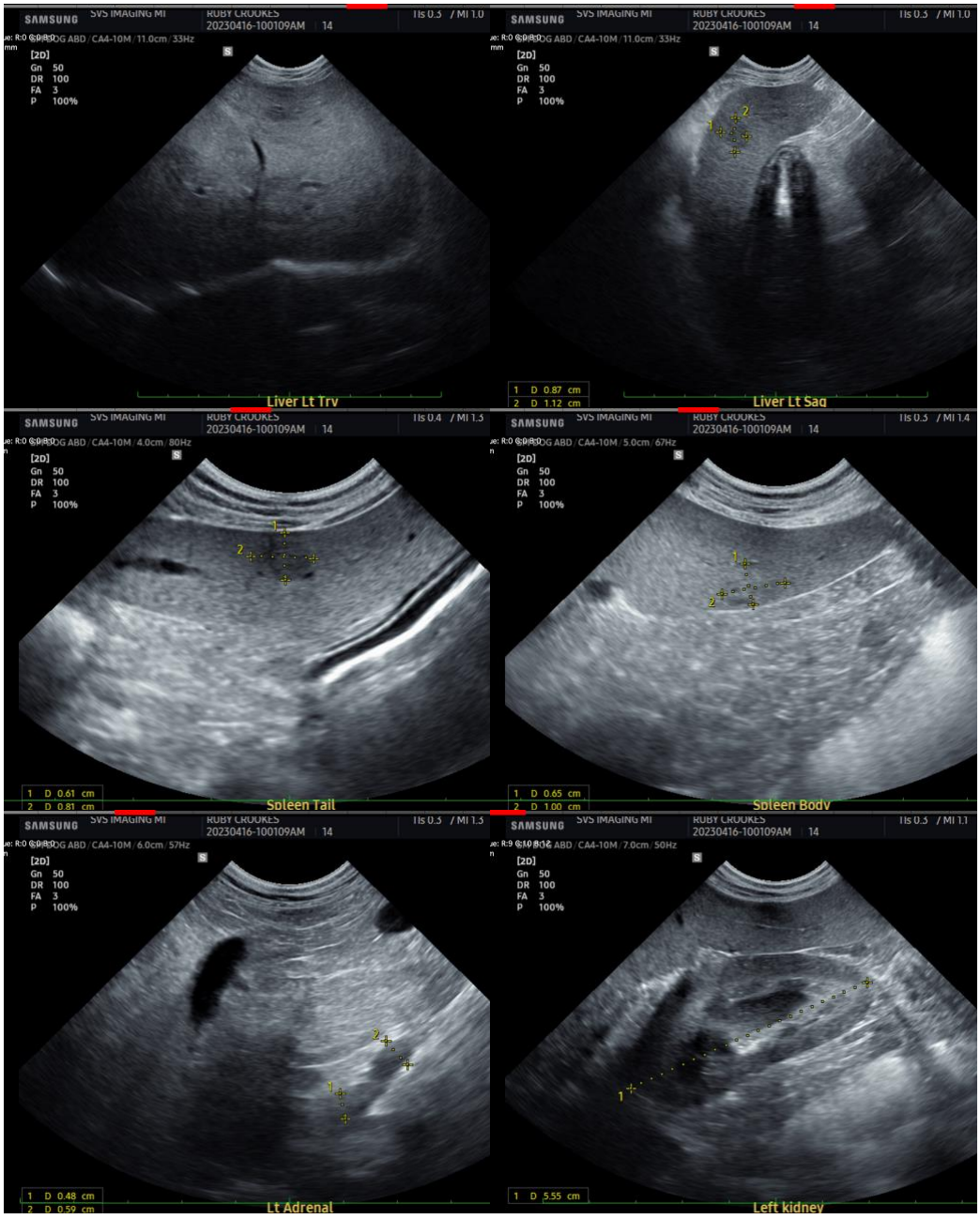

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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