SonoPath
Clinical Sonography & Telecytology
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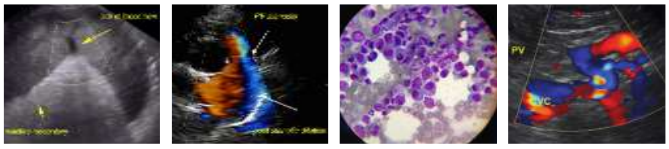


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Casey Cohen

SPECIES

Canine

BREED

Labradoodle

SEX

Spayed Female

AGE

13 years 8 months

WEIGHT

24.7 lbs.

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Summit Dog and Cat

REFERRING VET

Dr. Levitian

INVOICE

12136

DATE

8/17/21

PRESENTING CLINICAL SIGNS

LDDST suggestive of possible adrenal dependent hyperadrenocortisim- adrenal mass, CKD, recurrent UTI's, liver enzyme elevation. Current meds: Denosyl, Azodyl, Epakatin, Proin, Carprofen, renal diet.

Abnormal PE/Chem/CBC/UA Results: Neuts 82%, PLT 481, HGB 11.4 (12.1 L), HCT 34%, AKLP 400, ALT 342, AST 79, BUN 56, Chol 568, Crea 2.6 (1.6 H), Phos 9.3 (6 H), Glu 66, USG 1.007, Trace protein, trace blood. Microalb 15.0mg/dl (<2.5 H), Cortiol 1 pre- 2.9, Cortisol 2 4h post- 2.7 (1.4 H); Cortisol 3 8h post- 2.7 (1.4 H)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder exhibited mild to moderate generalized distention yet subjective normal tone. Anechoic urine was present with no sediment or calculi. The urethra exhibited normal structure and tone to a depth of 3.0 cm.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Pinpoint dystrophic medullary mineralization was present. Minor right kidney pyelectasia was noted. The left kidney measured 4.2 cm in length. The right kidney measured 4.6 cm in length.

Adrenal Glands

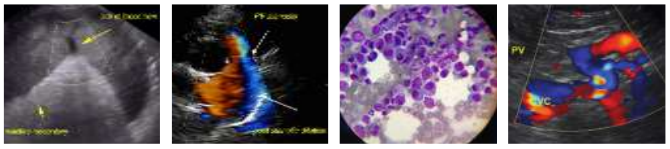
The bilateral adrenal glands were enlarged in size. Mild parenchyma heterogeneity and mild capsule asymmetry were present without suspicion for overt neoplasia. Both adrenal glands exhibited multifocal, uniformly hyperechoic nodules, without evidence of parenchymal escape or overt vascular invasion. An example of a left adrenal gland nodule measured 0.85 cm in diameter. An example of a right adrenal gland nodule measured 0.67 cm in diameter. The left adrenal gland measured 3.9 cm length x 1.9 cm width in the cranial pole and 1.52 cm width in the caudal pole. The right adrenal gland measured 2.0 cm length x 1.8 cm width in the cranial pole and 1.2 cm width in the caudal pole.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

Liver/ Gallbladder

The liver was mildly enlarged with a rounded contour. The parenchyma of the liver exhibited mild generalized increased echogenicity compared to the falciform fat and spleen. The echotexture of the liver parenchyma was uniform with a mild coarse echotexture. The hepatic and portal vasculature were



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normal in appearance without signs of congestion. The gallbladder exhibited mild generalized distention. The gallbladder walls were subjectively non-thickened yet exhibited mild Increased mural echogenicity. A moderate amount of non-dependent, mildly inspissated yet nonorganized, nonmineralized, .luminal debris was present. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material. The gastric body wall measured 0.41 cm width.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material. The jejunum wall measured 0.38 cm width.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

A small pocket of scant, free fluid was noted between the liver and cranial gallbladder.

No lymphadenopathy was noted.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Bilateral moderate chronic renal changes with pinpoint medullary mineralization and minor right kidney pyelectasia
- Bilateral adrenomegaly with hyperechoic nodules
- Hepatopathy - subjectively chronic, steroid vacuolar hepatopathy given the positive LDDST, inflammatory hepatic parenchymal or hepatobiliary process given the presence of gallbladder debris with hepatic neoplasia considered a less likely differential diagnosis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pyelectasia in the right kidney may be owing to chronic renal changes, potential pelvic scarring possibly owing to previous mineral passage, IV fluid therapy (if applicable), while the possibility of low-grade chronic right kidney pyelonephritis given the recurrent UTIs cannot be definitively excluded. Recheck urine C/S and baseline urine protein: creatinine ratio may be considered.

The appearance of the bilateral adrenal glands is likely consistent with pituitary-dependent hyperadrenocorticism and associated adrenal hyperplasia. The hyperechoic nodules were not specific yet may suggest a concurrent adenomatous change. The potential for left or right or potential bilateral adrenal neoplasia cannot be definitively excluded with potential for mixed pathologies.

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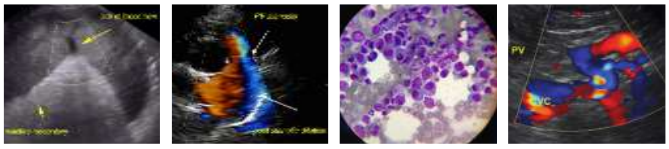

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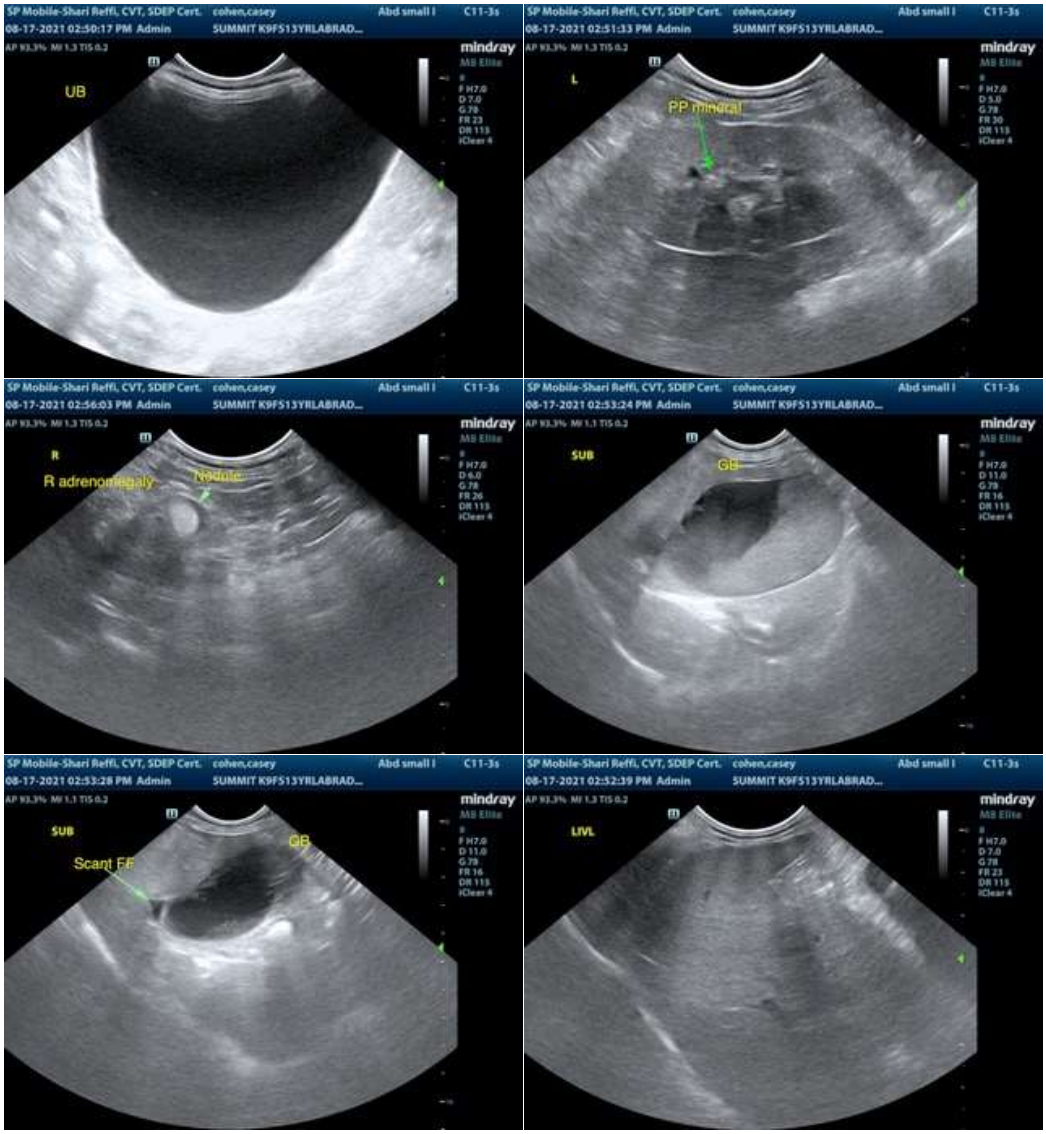
The overall appearance of the gallbladder was not classic for a mature inflamed gallbladder mucocele. However, partial gallbladder mucocele with nonorganized to subjectively mobile luminal debris may be present. Continued monitoring of hepatic enzyme levels as well as ideally sonographic monitoring of the gallbladder, especially if evidence of cranial abdominal or subxiphoid pain or increasing events of cholestasis, is recommended. Some or all of the following protocol would be appropriate.

Enrofloxacin 5 mg/kg SID PO & **Metronidazole** (10-20 mg/kg po bid) over 3 weeks, **Ursodiol (**10-15 mg/kg p.o. q24h) over 8 weeks and recheck sonogram. Monitor rapid rise in ALT, SAP, Bilirubin, bilirubinuria, leukocytosis, focal cranial abdominal subxyphoid discomfort or progressive anorexia. More information regarding clinical emerging mucocele issues may be found with our article and research at http://sonopath.com/resources/articles, ***Defining a GB Mucocele*** and ***Clinical Parameters in Dogs with Sonographically Diagnosed Surgical Biliary Disease*** from ECVIM 2009.



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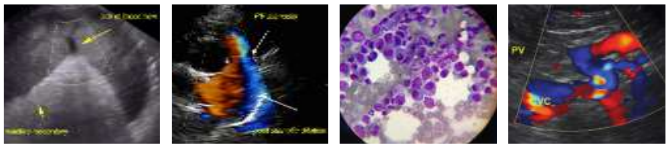

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com