

PATIENT

Jazzy Holeman

SPECIES

Canine

BREED

Cocker Spaniel Mix

SEX

FS

AGE

15 years

WEIGHT

5.8 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Patti Mayfield DVM

HOSPITAL NAME

Bend Animal
Emergency Specialty
Center

REFERRING VET

Adam Stone DVM

INVOICE

10073ag

DATE

2/25/22

PRESENTING CLINICAL SIGNS

Patient presented to BAESC on 2/24/22 for evaluation of the following: -- P started not feeling good every this AM. Panting and wanting to leave O's side. Vomiting about 4 times per day, no diarrhea. O gave 1/2 of 50mg Tramadol

Abnormal PE/Chem/CBC/UA Results: PE findings: Lenticular sclerosis OU. Advanced dental disease. 5-7% dehydrated. Multiple dermal papillomatous-like masses. Slightly painful abdomen. Stiff on ambulation with suspected OA. CBC: -- PMN: 13,240/uL (2950-11,640) CHEM: -- ALT: 1653 U/L (10-125) -- Tbili: 2.5 mg/dL (0-0.9) -- ALP: 865 U/L (23-212) -- GGT: 17 U/L (0-11) -- LIPA: 2189 U/L (200-1800)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some mildly increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. Focal areas of non-obstructive medullary mineral to small renoliths present in both kidneys. No evidence of pelvic dilation was present. The left kidney measured 3.6 cm in length. The right kidney measured 3.0 cm in length.

Adrenal Glands

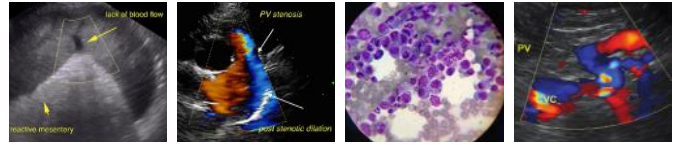
The left adrenal gland exhibited mild generalized enlargement. The left adrenal gland measured 1.35 cm width at the caudal pole and 1.1 cm width at the cranial pole. A well-defined, mildly hyperechoic nodule was present in the adrenal gland with mild associated symmetrical capsule expansion. The nodule did not exhibit signs of mineralization, overt evidence of parenchymal escape or vascular invasion. The nodule measured 1.1 cm in diameter. The right adrenal gland was normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The right adrenal gland measured 0.79 cm width in the cranial pole and 0.33 cm width in the caudal pole.

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver/ Gallbladder

The liver was subjectively normal in structure and contour with mild subjective lobar swelling present in the mid to left liver with concurrent nonspecific discretely hypoechoic intraparenchymal nodules.



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Example of a nodule measured 1.0 cm in diameter. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was distended in size with mildly prominent to edematous walls exhibiting normal echogenicity. Subtle evidence of peripheral inflammation was noted. There was biliary sludge that appeared to be non-mobile and organized. A stellate pattern to the organized biliary sludge was present. No effusion was present.

Gastrointestinal

The stomach presented mild wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. Mild gastric distension with primarily mild to moderate anechoic fluid was present without evidence of retained ingesta, foreign material or mechanical pyloric outflow obstruction.

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.

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

Pancreas

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

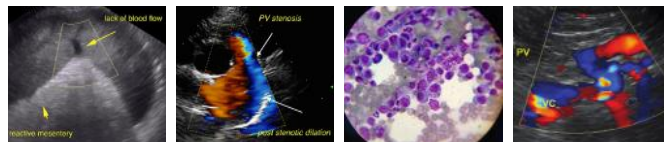
Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Mild left adrenomegaly with mid to caudal nonspecific nodule-functional vs nonfunctional adenoma, hyperplasia, lipogranuloma, neoplasia such as pheochromocytoma, adenocarcinoma possible.
- Gallbladder mucocele with minor peripheral inflammation.
- Hepatomegaly exhibiting parenchymal remodeling and subjective lobar swelling exhibiting mild mass effect with intermittent discrete hypoechoic intraparenchymal nodules.
- Mild chronic renal changes with mild non obstructive medullary mineral/small renoliths.
- Mild heterogeneous pancreas-nonspecific. Patient variant or age related, potential for low grade to chronic pancreatitis.



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

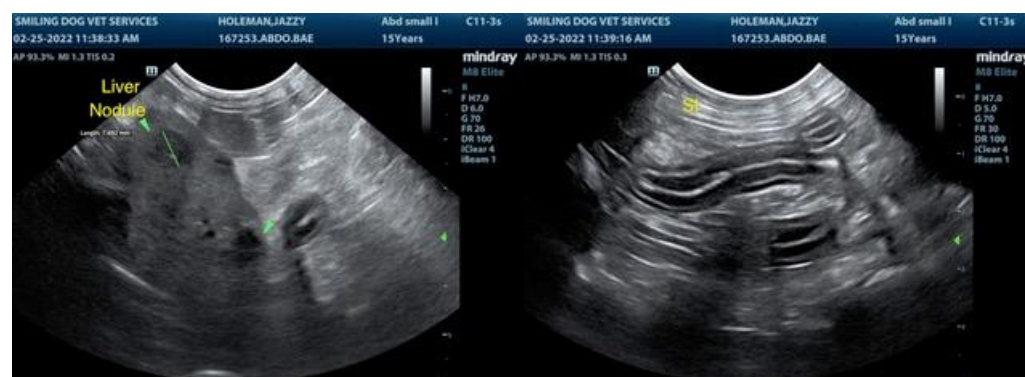
The cause of the patient's current clinical signs are suspected to be owing to the gallbladder mucocele with secondary gastritis and primary or secondary hepatopathy. The hepatopathy is suggestive of inflammatory hepatopathy given the ALT elevation as well as cholestatic hepatopathy given the ALP and TBIL elevation. Without overt evidence of post hepatic obstruction, potential for low grade pancreatitis could be present. Areas of concurrent hepatic hematopoiesis or nodular/regenerative hyperplasia suspected although neoplastic criteria cannot be definitively excluded.

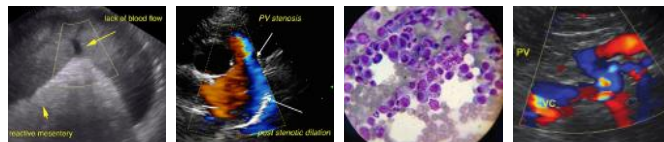
Hepatic FNA within the area of nodular changes and lobar swelling warranted for screening cytology primarily to assess for neoplasia prior to potential surgical considerations. Screening BP to assess for potential hypertension associated with the left adrenal nodule is suggested. Cholecystectomy with gross inspection of the liver, hepatic biopsies as well as gross inspection of the left adrenal gland +/- left adrenalectomy may be considered.

Empirically some or all of the following protocol with as needed gastrointestinal support would be reasonable.

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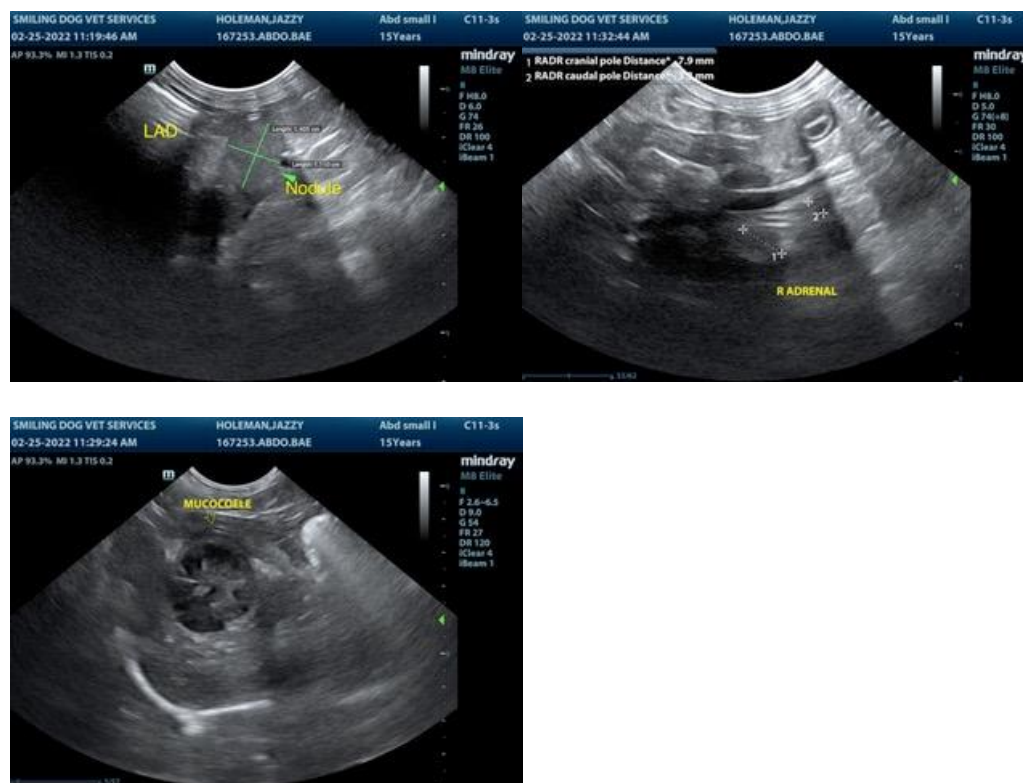
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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info@SonoPath.com