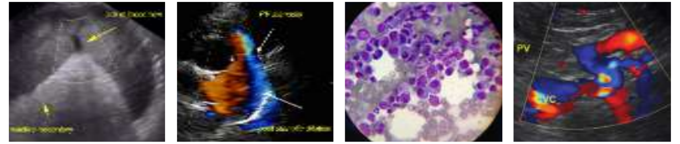
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Lucy O'Brien

SPECIES
Canine

BREED
Havanese

SEX
FS

AGE
12 years

WEIGHT
10.86 lbs.

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

IMAGING PERFORMED BY
Dr. Hannah Fearing

HOSPITAL NAME
Lanier AH

REFERRING VET
Dr. Hannah Fearing

INVOICE
12819

DATE
12/14/21

PRESENTING CLINICAL SIGNS

Hx of episode of pancreatitis in July w/ vomiting, diarrhea, inappetence. Responded to treatment but has had a few bouts of diarrhea since then. Starting this weekend, had diarrhea, inappetence, and recently hematochezia. Seems painful in abdomen on PE but otherwise unremarkable.
Abnormal PE/Chem/CBC/UA Results: July 2021 - slightly elevated ALT (199), mildly low TT4 (0.8), abnormal SNAP cPL Today - mildly elevated ALT (160), ALP (432) and GGT (13), hypercholesterolemia (428) despite anorexia, mildly low TT4 (0.7), *normal* SNAP cPL

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 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 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 mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Areas of nonobstructive medullary mineral, primarily in the lateral diverticuli of both kidneys, were present. The left kidney measured 3.4 cm in length. The right kidney measured 3.4 cm in length.

Adrenal Glands

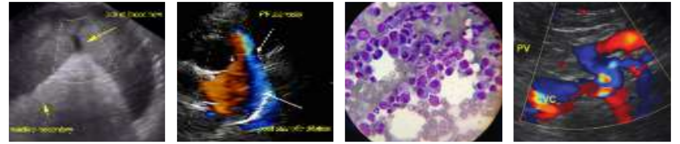
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.51 cm width at the caudal pole and 0.53 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.76 cm width at the caudal pole and 0.75 cm width at the cranial 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. Multiple pinpoint hyperechoic parenchymal foci were present in the spleen. These pinpoint hyperechoic parenchymal foci may indicate pinpoint areas of fibrosis, microinfarction, or mineralization, and likely incidental. 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 presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The



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hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with moderate, nondependent yet nonorganized, mildly congealed gallbladder debris. 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 width measured 0.40 cm.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Intermittent jejunal mucosal speckling was present. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. The duodenum wall width measured 0.36 cm. The jejunum wall width measured 0.36 cm.

The colon walls presented intact yet prominent wall layering with mild thickened to echogenic submucosa. Nonformed to liquid fecal matter was present in the colon lumen with lumen dilation.

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

Focal jejunal lymph node was present. The lymph node was essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). The lymph node measured 0.6 cm diameter. No effusion was noted.

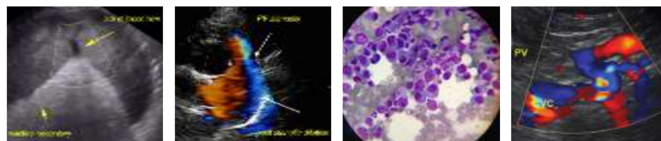
ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Age-related kidneys with nonobstructive medullary mineral
- Hepatopathy - subjectively benign, metabolic / reactive / vacuolar hepatopathy or inflammatory hepatopathy possible
- Moderate gallbladder debris (non-mucocele)
- Probable inflammatory gastroenterocolonopathy with focal to intermittent benign jejunal lymphadenopathy
- Heterogeneous pancreas - mild parenchymal remodeling owing to previous inflammation, age-related variant, or low-grade to chronic pancreatitis possible

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Potential considerations in this case, given the recurrent gastrointestinal signs, may include persistent low-grade to chronic pancreatitis, dysbiosis, food hypersensitivity / intolerance, IBD, or less likely intestinal neoplasia. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Empirically, a limited antigen or hydrolyzed diet trial with potential long term dietary therapy, prophylactic deworming (Panacur 50 mg/kg SID x 5 consecutive days with repeat protocol in 3 weeks even if fecal testing is



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negative), high colony count probiotic (Proviable or Visbiome), antibiotic trial and as needed gastrointestinal support with an assessment of clinical response may prove beneficial. Intestinal biopsies may be indicated if GI signs continue despite empirical therapy.

Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial.

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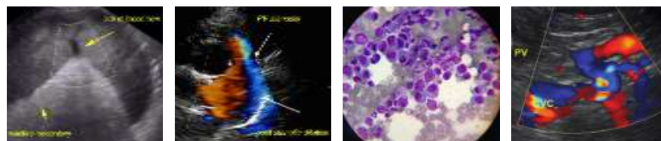

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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