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Clinical Sonography & Telecytology
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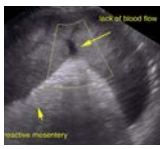
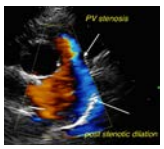
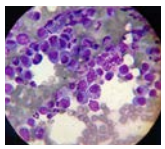
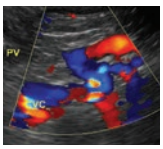

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Ranger Keller

SPECIES
Canine

BREED
Retriever X

SEX
Neutered Male

AGE
2 Years 9 Months

WEIGHT
81.2 Pounds

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Kelly Vazquez

HOSPITAL NAME
Westwood Regional

REFERRING VET
Dr. Taylor McConnell

INVOICE
39370

DATE
7/8/22

PRESENTING CLINICAL SIGNS

Chronic, intermittent diarrhea, no improvement with metronidazole or Tylan. Current meds: metronidazole, Tylan.
Abnormal PE/Chem/CBC/UA Results: CBC/Chem: NSF.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is not fully distended, however, no major abnormalities are noted with wall thickness. It is smooth and regular. Its contents are anechoic and there is no evidence of sediment, cystoliths, polyps or a mass.

The **prostate** is homogenous and measures 0.83 cm; within normal limits for a neutered male.

Kidneys

The **left** kidney measures 6.23 cm. The capsule is smooth. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 6.27 cm. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.40 cm at the cranial pole, 0.40 cm at the caudal pole and 2.86 cm in length. Although the gland is not thinner than the normal, it appears flattened. No abnormalities are noted with the gland's overall echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland measures 0.53 cm at the cranial pole, 0.43 cm at the caudal pole and 1.88 cm in length. Although the gland is not thinner than the normal, it appears flattened. No abnormalities are noted with the gland's overall echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Spleen

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver's echotexture is homogeneous and it is within normal limits in echogenicity (spleen is hyperechoic compared to the liver). Focal lesions are not observed and no abnormalities are noted with the hepatic vessels.

The gallbladder (GB) wall is within normal limits in thickness and echogenicity. A small to moderate amount of free floating and gravity-dependent echogenic material is present within the GB. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

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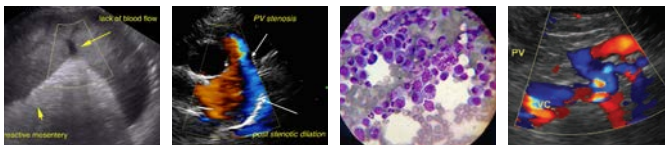

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Gastrointestinal

A large amount of ingesta and gas are present within the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. An in-depth evaluation of the stomach is difficult to perform, however, no obvious abnormalities are noted.

Jejunum: Wall thickness is within normal limits and the definition of the wall layers is preserved. No abnormalities were noted initially when the jejunum was evaluated, other than a small to moderate amount of ingesta in the lumen of most of the small intestines. However, a mildly dilated segment of jejunum is visualized in the caudal abdomen, which is filled with a moderate amount of ingesta, fluid and gas. Decreased peristalsis, i.e. "a to and fro" motion, is noted. An obvious foreign body, mass or obstruction is not observed.

The thickness of the colonic wall is variable; some areas are within normal limits, while others are mildly thickened at 0.26 cm. Mural detail is conserved however certain segments that are thickened have a mildly prominent mucosa and muscularis. The fecal matter at the distal colon, just cranial to the urinary bladder, is not formed and is granular. The colon is filled with gas as one traverses cranially.

Pancreas

No abnormalities are observed with the architecture, contours, echogenicity or echotexture of the pancreas. There is no evidence of hyperechogenicity of the surrounding mesentery, i.e., signs of active pancreatitis are not present.

Other

Lymph nodes No abnormalities are observed

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- **Gastrointestinal tract**: A delay in gastric emptying may be present if Ranger was fasted. There are no obvious abnormalities with the stomach, however, subtle changes may be overlooked due to the large amount of ingesta present. Signs of decreased or ineffective peristalsis are present in a couple of segments of jejunum. The colonic changes are consistent with chronic inflammation, however, an underlying inflammatory enterocolitis cannot be excluded, for example, food intolerance, inflammatory bowel disease, dysbiosis, etc.

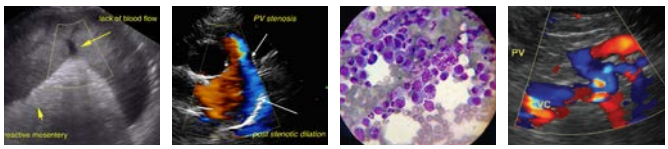
- **Gallbladder**: Gallbladder sludge is often clinically insignificant, however, gastroesophageal reflux disease (GERD), can occur in some patients. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid or proton pump inhibitor or may be required. Ursodeoxycholic acid may be necessary in the future depending on blood work results and clinical signs. Obvious signs of cholecystitis are not appreciated.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Routine bloodwork is suggested, including a CBC, serum biochemical profile, *baseline cortisol and urinalysis (a urine specific gravity, at the very least).

A baseline cortisol is strongly recommended to exclude hypoadrenocorticism

Fibre responsive diarrhea is very common in young, large breed dogs. A diet, such as Hill's Biome is recommended.



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Depending on his current diet, another option is to supplementation his diet current diet with **soluble fibre (e.g. psyllium).** A slow up-titration of the dose is suggested to avoid gas, bloating, cramps, and discomfort. **Evaluate label for xylitol if using human forms of psyllium.*

A TLI, serum cobalamin, and folate to assess for maldigestion/malabsorption disease and dysbiosis.

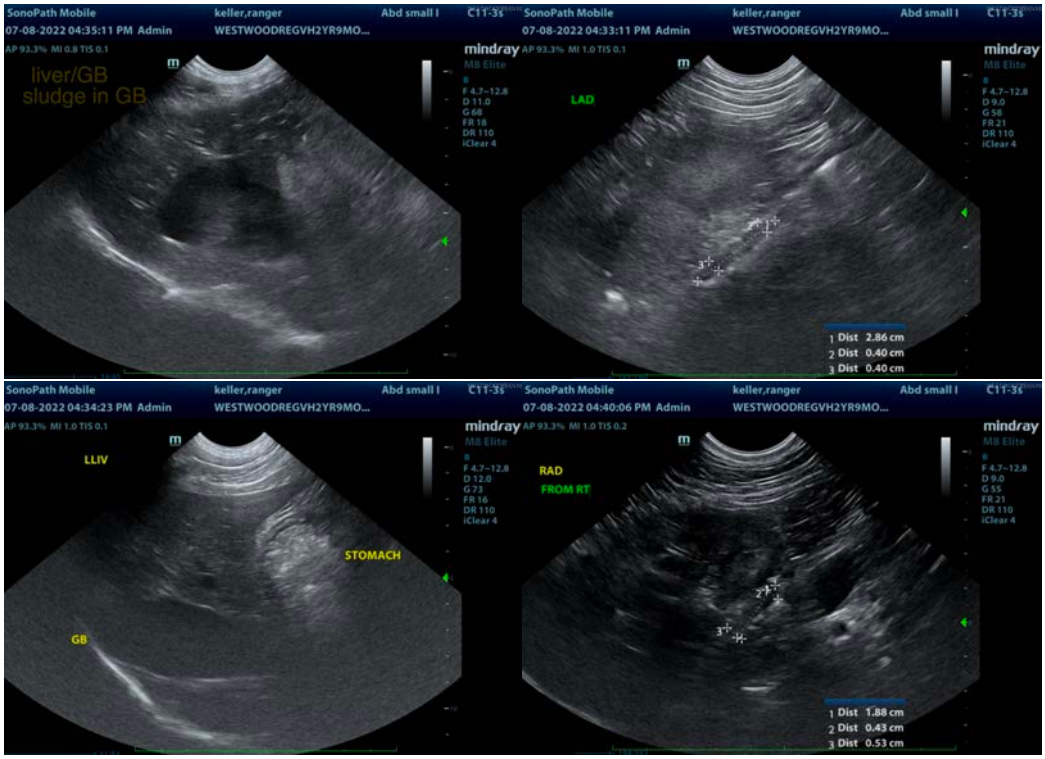
Food responsive diarrhea is also possible, therefore, if fibre is not beneficial, different hypoallergenic, +/- hydrolyzed diets, may be tried. Note, hydrolyzed diets are low in fibre, therefore supplementation may be necessary if diarrhea worsens.

Ultimately, endoscopic biopsies may be required.

A synbiotic and a clay based paste, containing montmorillonite, should treat acute episodes of diarrhea.

Chronic diarrhea can be extremely frustrating to treat. Although some treatment recommendations have been described, an internal medicine consult may be considered to describe all possible options in further detail.

A sonographic re-evaluation of the gallbladder sludge is suggested in 8-12 months depending on clinical signs, blood work and urinalysis results.



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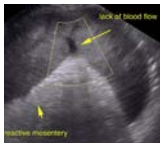
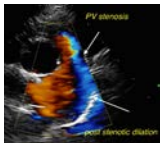
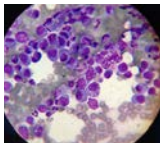
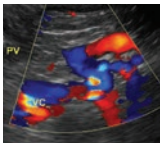

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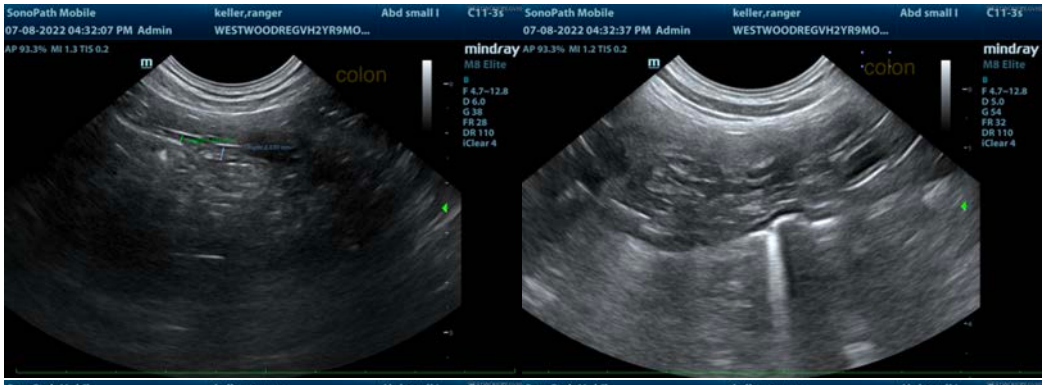

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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