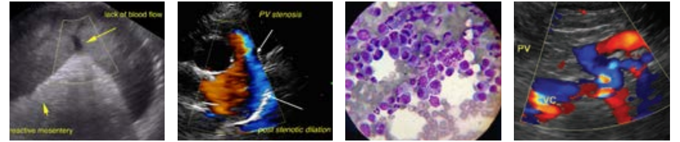


SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT
Teemu Thomas

SPECIES
Canine

BREED
Alaskan Klee Kai

SEX
Neutered Male

AGE
15 Years

WEIGHT
5.6 kg

INTERPRETED BY
Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY
Erin Wicks

HOSPITAL NAME
Shores VEC

REFERRING VET
Dr. Lupole

INVOICE
40285

DATE
8/10/22

PRESENTING CLINICAL SIGNS

Presented at our hospital for lethargy and bloody diarrhea. Last night patient had an accident in the house which is very abnormal for him. Patient also vomited 1-time last night. Today patient has been having explosive diarrhea that is red and complete liquid. Patient is very lethargic and unstable when he does walk. Patient has been getting into trash recently. Also has had some minor seizures at night per owner. Previous Health Concerns: arthritis Current Medications: carprofen
Abnormal PE/Chem/CBC/UA Results: Abdominal: tense on abdominal palpation mid to cranial abdomen, no obvious mass appreciated Radiographs: mild bronchointerstial pattern- no cardiomegaly or pulmonary edema noted, loss of detail cranial abdomen- difficult to see stomach on lateral but ingesta vs. foreign material on V/D, no evidence of obstruction, ingesta vs. foreign material in small intestines- no gas distention, soft stool in colon. Chemistry: BUN 47.3 H, Creat 1.6 H, IP 9.4 H, Globulin 3.9 H, Glucose 71 L, Cholesterol 346 H, ALP 186 H CBC: PMN 14.77 H, stress leukogram, Plt 512 H EPOC: pH 7.316 L, Lactate 5.13 H, BUN 39 H, Creat 2.11 H, Glucose 61 L, HCT 39% N cPL: abnormal

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 (0.50 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.

The area of the prostate is examined without evident pathology.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measured 4.32 cm. The right kidney measured 3.39 cm. A 1.5 cm diameter fluid filled cortical cyst is noted in the caudal pole of the left kidney.

Adrenal Glands

The right adrenal gland is normal in size (0.51 cm at the cranial pole and 0.53 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

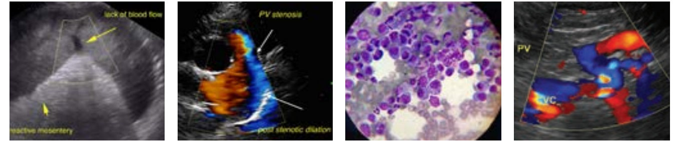
The left adrenal gland is normal in size (1.7 cm long x 0.48 cm at the cranial pole and 0.53 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.



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Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. 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 stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) 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 (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- **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.

- Age related kidney changes

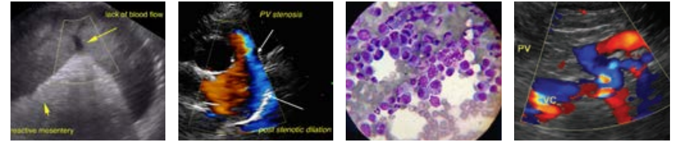
- Otherwise relatively unremarkable/normal abdomen without an obvious visible cause for the patient's gastrointestinal signs, hematochezia and/or hypoglycemia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the combination of gastrointestinal signs as well as hypoglycemia (as well as neurologic signs, which are likely secondary to the hypoglycemia), recommendations include:

- A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

- Bile acids are recommended if not recently evaluated.



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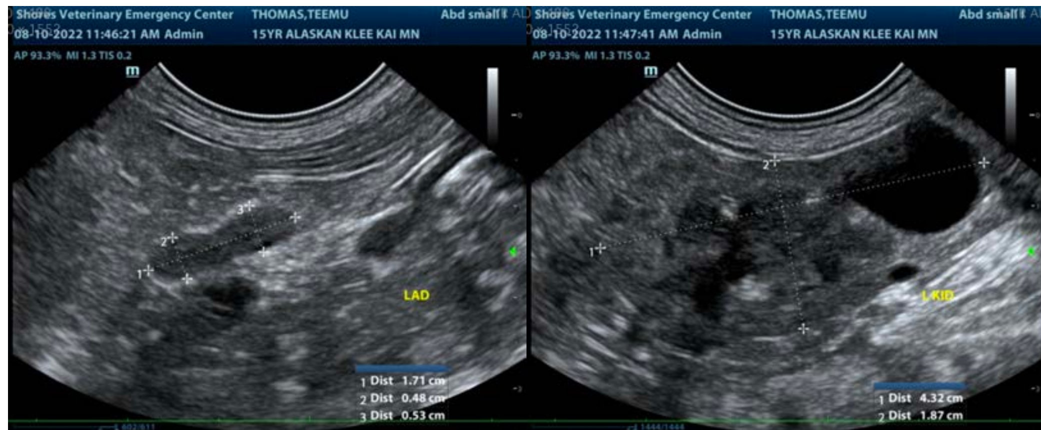
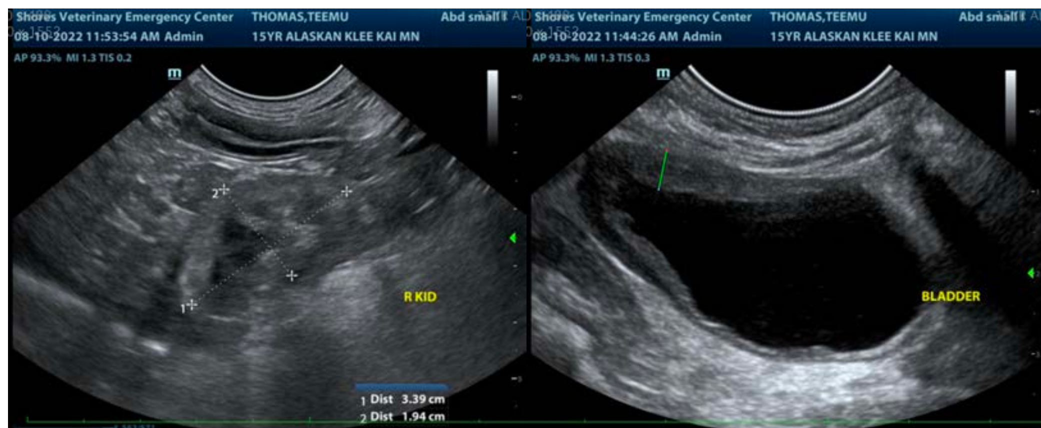
- If cortisol is normal and bile acids are normal, a paired insulin to glucose ratio is recommended with the insulin level drawn at the time that the blood glucose is <50.

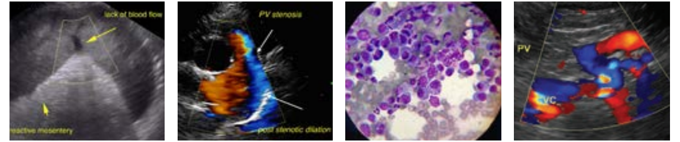
- Given the mild azotemia, Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

Other differentials include some sort of toxin if the history supports it, and/or septicemia, as could potentially be present in this case with bacterial translocation secondary to the gastrointestinal disease/hemorrhagic gastroenteritis, etc. While further evaluation occurs, empirical therapeutic recommendations include dextrose supplementation and rehydration/fluid therapy with antiemetics, gastroprotectants, and appetite stimulants. Broad-spectrum antibiotics including either Metronidazole or Tylosin (for the large bowel component) are also recommended.

Empirical deworming with a 5-day course of Panacur is also recommended if not recently done.







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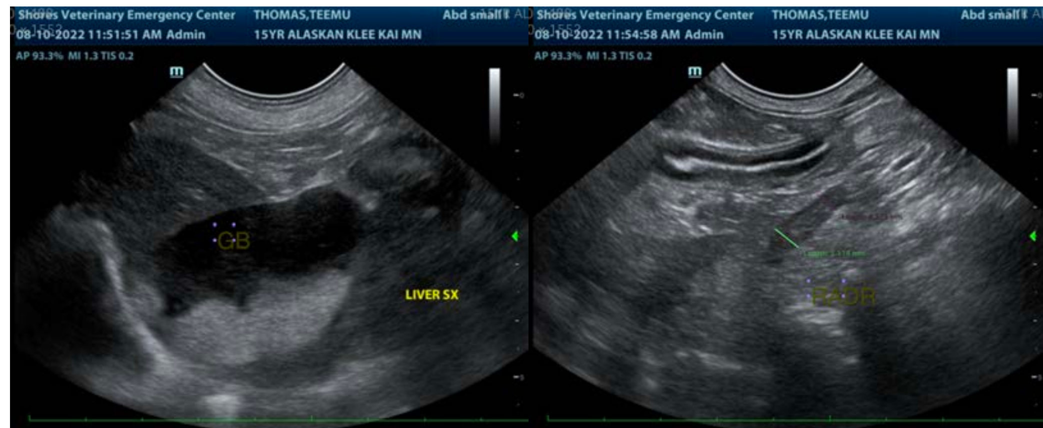

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com