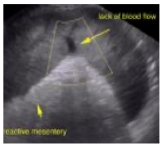
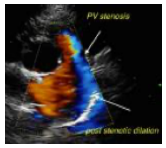
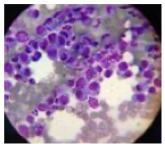
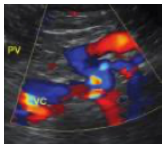
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT
Suzy Augustine

SPECIES
Canine

BREED
Terrier Mix

SEX
Spayed Female

AGE
7 years

WEIGHT
6.3 kg

INTERPRETED BY
Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY
Dr. Brittany Gardner

HOSPITAL NAME
Wilvet Salem

REFERRING VET
Dr. Brittany Gardner

INVOICE
11199

DATE
7.7.22

PRESENTING CLINICAL SIGNS

History: Brief History: P presented laterally recumbent, cyanotic, hypotensive and tachycardic. Hx of diarrhea with blood that day and lethargy. Dental 2 weeks ago, has been on carprofen since then, stopped that med 2 days ago. BG was 62 on presentation, received 1 dextrose bolus, but didn't need to be supplemented after that and BG has remained static Received albumin transfusion Tachycardia responded to fentanyl bolus history of tracheal collapse

Abnormal PE/Chem/CBC/UA Results: 7/5/22: Very obtunded and laterally recumbent on presentation. BCS 3/5. MM pale pink CRT approx 3 seconds. BP was reduced. Does have PLR bilaterally. No obvious changes to optic disk. Menace response decreased. AFAST- appears to have potential of small amount of free fluid present around intestines. CBC- MCH 20.9pg Reticulocytes 158.1 K/uL Chemistry- BG 62 mg/dL Ca 7.4 mg/dL (suspect decreased serum albumen causing this, pancreatitis, hyperadrenocorticism, toxin, EDTA contamination, hypovitaminosis D, nutritional secondary hyperparathyroidism) TP- 3.0 g/dL (maldigestion/malabsorption, increased loss (blood loss, pancreatitis, PLE, hypoadrenocorticism, liver disease) Albumen 1.1g/dL Globulin 1.9 g/dL ALP < 10 U/L Cholesterol 18 mg/dL (decreased production liver disease, or could be malabsorption/maldigestion) EPOC- Bicarbonate 13.8 mmol/L TCO2 low 14.2 mmol/L pH 7.22 BE -13.9 mmol/L ica 1.04 mmol/L Anion gap 23 mmol/L Lactate 7.93 mmol/L PT 18 seconds (11-17) PTT 105 seconds (72-102) Cortisol- <1 ug/dL ECG tracing in house- no significant abnormalities noted after watching for approx 2 minutes. sinus tachycardia- responsive to pain medication 7/6/22: BAR, vitals wnl mm pk/m w/ CRT < 2s. EENT: no nasal or ocular discharge. H/L: NMA, SSP; lungs clear, eupneic. ABD: tense on deep palpation but pliable. M/S: amb x 4 w/ no lameness. NEU: appropriate mentation.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The **left kidney** is normal size (3.71 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The **right kidney** is normal size (4.52 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The caudal pole in the **left adrenal gland** is small in size (0.31 cm in width), with a normal shape, glandular echogenicity and detail. Surrounding vasculature appears normal.

The **right adrenal gland** is small in size (0.30 cm at caudal pole), with a normal shape, glandular echogenicity and detail. Surrounding vasculature appears normal.

Spleen

The **spleen** is normal in size (1.12 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 0.63 cm hypoechoic nodule is observed at the caudal aspect. Splenic vasculature is normal.

Liver
The **liver** is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

Gall bladder
(No images provided).

Gastrointestinal
The **stomach and intestine** are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with gas and chyme. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas
The left limb is visible, with minimal deviation from the normal peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated.

Free Abdomen
The mesentery in the cranial abdomen is hyperechoic. Trace free fluid is observed. A 1.38 cm medial iliac **lymph node** is visualized. A 0.52 cm gastric lymph node is also seen.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The small adrenal glands bilaterally may be a normal variant for this patient or may be secondary to early atrophy resulting from hypoadrenocorticism.
- The pancreatic changes could be consistent with mild pancreatitis or may be normal for this patient. Correlation with the patient's clinical history is recommended.
- The cranial peritonitis may be secondary to pancreatitis, gastroenteritis, perforating ulcer, other.

Secondary Findings

- The splenic nodule trends toward the benign (i.e., focus of lymphoid hyperplasia, extramedullary hematopoiesis or similar) with a lower possibility of emerging neoplasia.
- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Consider obtaining images of the gall bladder to assess for underlying pathology.

Given the low resting cortisol level and small adrenal gland, an ACTH stimulation test is recommended to assess for hypoadrenocorticism.

Consider a cPLI to further assess for pancreatitis.

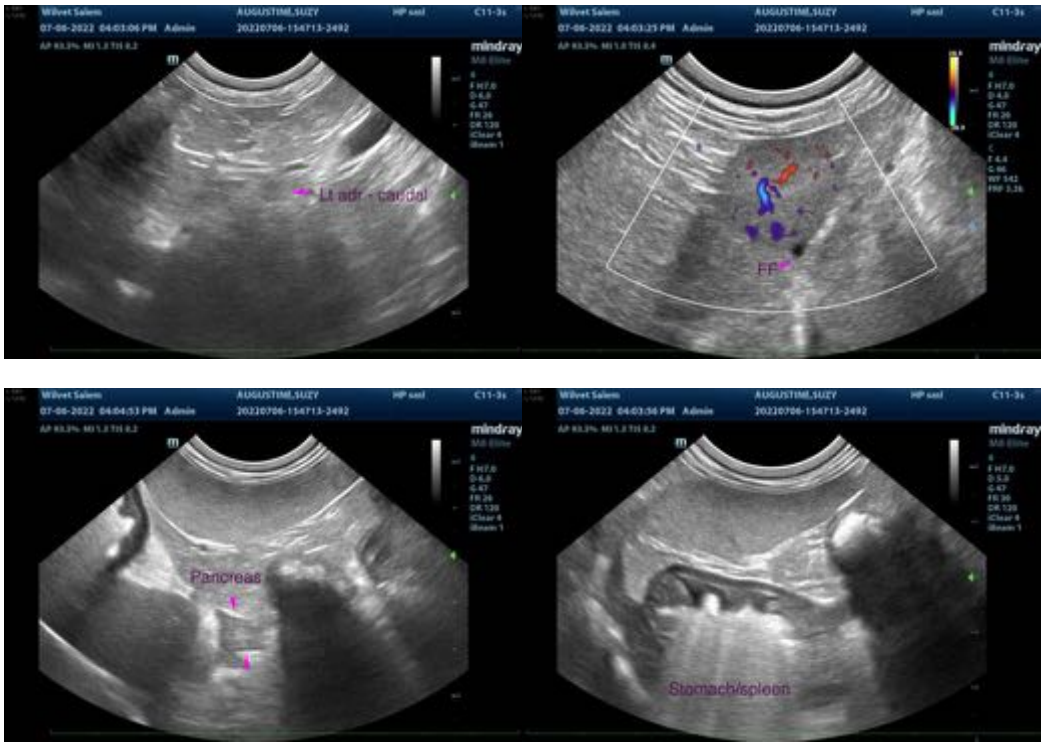
A fecal evaluation for ova and Giardia as well as prophylactic deworming with fenbendazole is recommended.

Supportive care for acute hemorrhagic gastroenteritis is recommended, including fluid therapy, broad-spectrum antibiotics, antiemetics, gastric protectants, and a probiotic with a high colony count (i.e., Proviable Forte or Visbiome). Given the history of NSAID use, empirical treatment for gastric ulceration is recommended.

Consider serial (i.e., daily) sonographic monitoring of the abdomen to assess for worsening peritonitis. If the amount of free fluid in the abdomen worsens, consider a fine needle aspiration with submission for fluid analysis and cytologic evaluation.

Given the patient's hypoalbuminemia, also consider the following:

1. Pre-and postprandial serum bile acids to assess hepatic function
2. UPC (if proteinuria is present)
3. Malabsorption panel, including serum cobalamin and folate, TLI and PLI
4. Depending on the results of the above diagnostics, endoscopic or surgical GI biopsies may be warranted, particularly if the patient does not respond to symptomatic care.




SI


Reactive mesentery


Rt adr - caudal


Splenic nodule

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.

Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com