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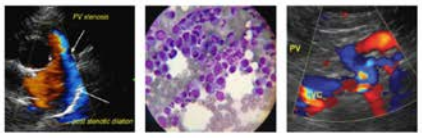

SonoPath
Clinical Sonography & Telecytology
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1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Sammy Drews

SPECIES

Canine

BREED

Shih Tzu

SEX

Neutered Male

AGE

9.5 Years

WEIGHT

10.4 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Runnells, RVT

HOSPITAL NAME

SVS Imaging KC

REFERRING VET

Dr. Holly Smith

INVOICE

43463

DATE

12/14/22

PRESENTING CLINICAL SIGNS

Initially presented on 12/7/2022 for non-specific symptoms - not eating, painful abdomen, painful lumbar spine, no vomiting or diarrhea at that time. CBC/chemistries - NSF and radiographs normal at that time. Re-presented on 12/12/2022 now vomiting and not eating. Had hemorrhagic diarrhea in the clinic. Repeat CBC showed hemoconcentration (HCT 61.5%) with leukocytosis and neutropenia. Repeat radiographs NSF. Treated with IV fluids, baytril and cerenia. Still not eating well. Submandibular lymphadenopathy presented as new symptom 12/13/2022 - cytology primarily small lymphocytes with pathology review pending.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The area of the prostate is examined without evident prostatic pathology.

The right kidney is normal in size (3.63 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (3.75 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is normal in size (0.71 cm at the cranial pole and 0.34 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 (0.57 cm at the cranial pole and 0.60 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.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta.

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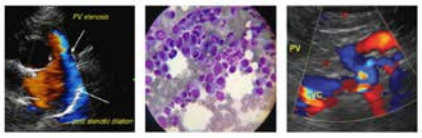

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There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Soft stool is noted in the colon.

**In the mid to caudal abdomen, there is a loop of bowel beginning to intussuscept into another loop of bowel. The loops appear to be small bowel, but an early or partial intussusception at the level of the Ileocecocolic junction, can't be definitively ruled out.

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

- There is a loop of bowel beginning to intussuscept. A full, non-resolving intussusception versus an early or intermittent intussusception cannot be differentiated. However, at this time there is no evidence of marked inflammatory change around the intussusception, etc., implying that it could be early, or potentially could resolve with supportive care.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Ideally, with aggressive supportive/symptomatic medical management, the partial/early intussusception will resolve. However, throughout the duration of the diagnostics, therapeutics, etc. described below, close monitoring of this area is recommended, and if patient status, clinical signs, etc. are not drastically improving, and/or if they worsen, exploratory laparotomy for possible intussusception removal may be warranted.

Given this patient's reported vomiting, hematochezia, combined with suspected neutropenia, etc., hemorrhagic gastroenteritis, potentially secondary bacterial translocation or even sepsis, could be causing everything. Further investigation for underlying viral disease, severe parasitic or protozoal disease, fungal disease if geographically appropriate, etc. is recommended, beginning with a fecal exam if not recently evaluated, as well as a fecal enteropathogen PCR panel to Texas A&M GI Laboratory, etc.

Additionally, a baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism. Atypical hypoadrenocorticism can result in similar clinical signs and a lymphocytosis.

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Given the marked CBC changes as well as the peripheral lymphadenopathy, further evaluation of cells in the form of a pathology review of the CBC as well as the reportedly already pending pathology review of the lymph node aspirate, are also recommended.

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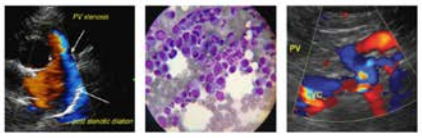

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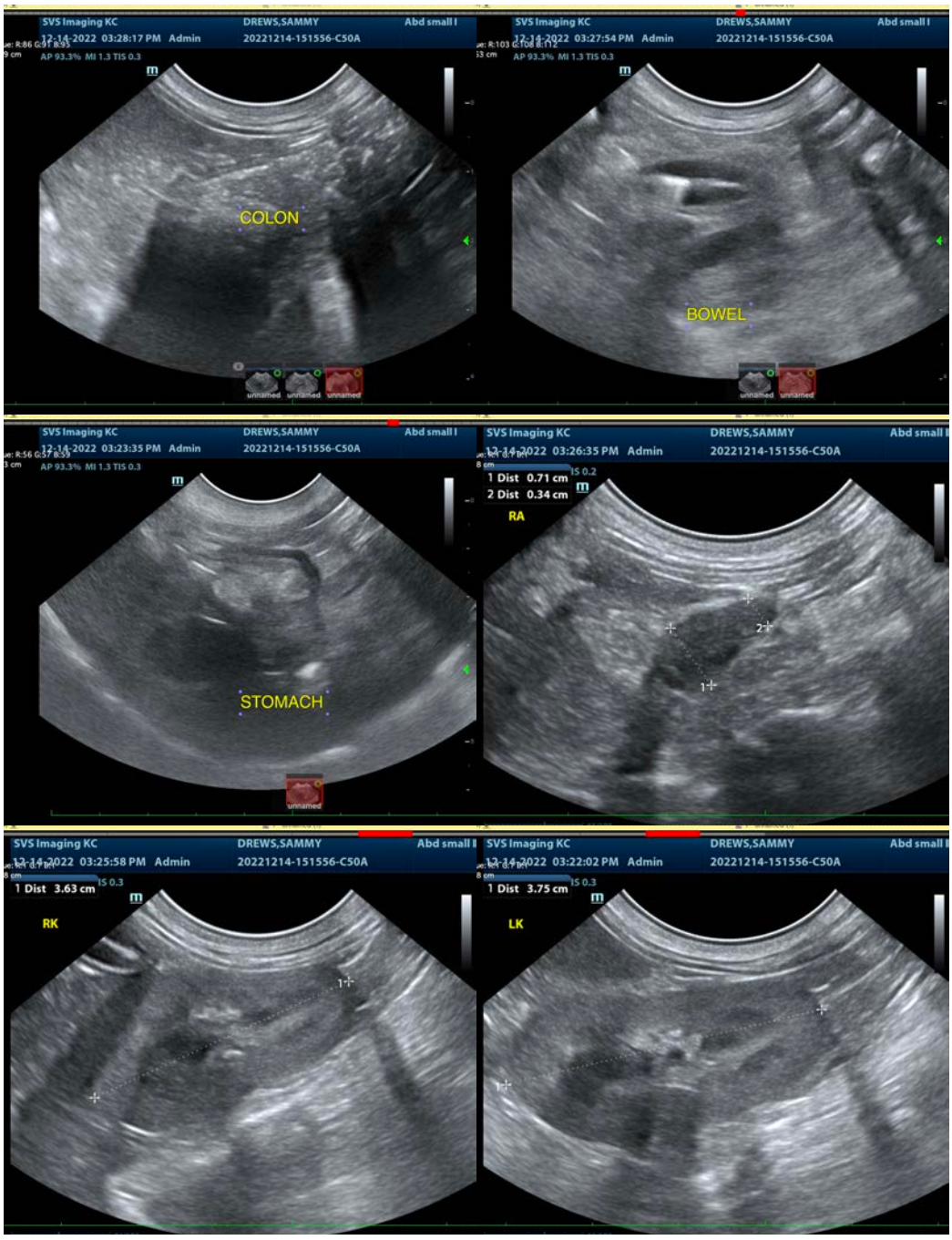
Ultimately, pending other results, bone marrow cytology may be warranted if neutropenia is real, and an overwhelming source of infection/sepsis, etc. can't be identified.

In the meantime, in addition to symptomatic/supportive care including fluid therapy, antiemetics, gastroprotectants including Sucralfate, broad-spectrum antibiotics, a probiotic such as Visbiome or Proviable, pain management, etc., empirical deworming with a 5-day course of Panacur is recommended.



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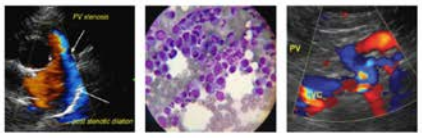

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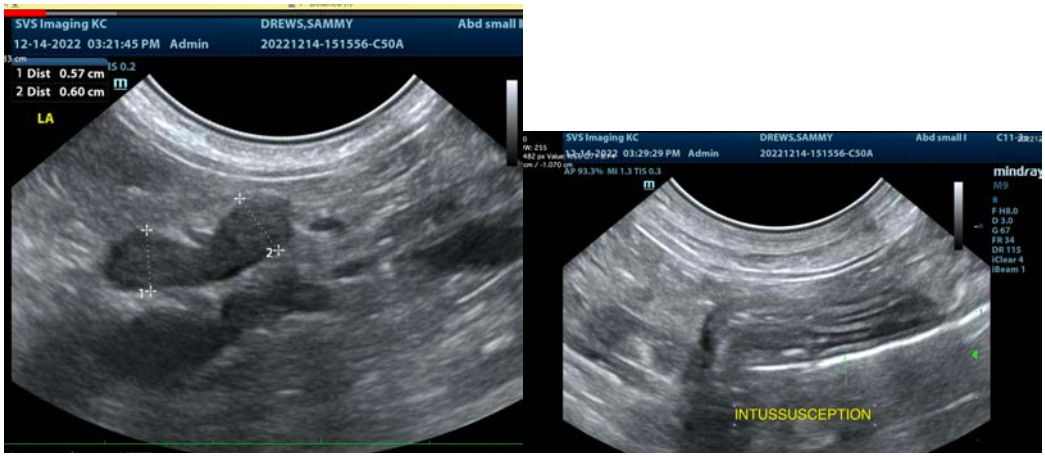

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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