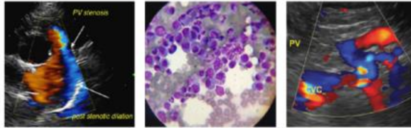
IMAGING PERFORMED BY
SVS Mobile Imaging KC 816 - 401 - 5010
svsimagingkc@gmail.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Tanner Andrews

SPECIES

Canine

BREED

Yorkie

SEX

MN

AGE

12 yrs

WEIGHT

8 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Runnells, RVT

HOSPITAL NAME

SVS Imaging KC

REFERRING VET

Dr. Jennifer Simom

INVOICE

15181

DATE

10/11/22

PRESENTING CLINICAL SIGNS

Diarrhea started in September. Not responsive to general diarrhea meds and metronidazole. Seen couple weeks later for continuing diarrhea. Ran labwork at that time. Now lethargic, bloated abdomen. Acting in pain per owners? Not eating very well.
Abnormal PE/Chem/CBC/UA Results: Stool - NOS; Urinalysis: NO protein, 3+ leukocytes, Cocci bacteria (free catch though); Labwork: leukocytosis (mild): neutrophilia, high platelets, low calcium and low protein/albumin Rads: heart looks normal size/shape. No lung abnormalities. Abdominocentesis performed yesterday (10th): 400 ml very clear transudate (low specific gravity and low protein)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and cystourethral junction 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.

No overt pathology was noted in the area of the residual prostate.

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. The left kidney measured 3.6 cm in length. The right kidney measured 3.6 cm in length. Pinpoint areas of medullary mineral were noted in both kidneys.

Adrenal Glands

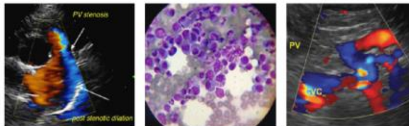
The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.45 cm width in the cranial pole and 0.46 cm width in the caudal pole. The right adrenal gland measured 0.38 cm width in the caudal pole. No evidence of adrenal tumors was noted.

Spleen

The spleen was mildly subnormal in size with symmetrical contour and generalized mild parenchyma heterogeneity. No splenic masses or nodules were noted.

Liver/ Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of hepatic congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.



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Gastrointestinal

The stomach presented wall mild thickening secondary to mild echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. The stomach was primarily empty with minor retained hyperechoic ingesta / chyme and luminal gas.

Intact yet generalized prominent intestinal wall layering owing to generalized propensity for prominent mucosa layer exhibiting generalized mucosal fogging was present with intermittent discrete hyperechoic mucosal striations. There was no evidence of an obstructive pattern or foreign material. The appearance of the small intestine is most consistent with protein-losing enteropathy or lymphangiectasia. There was no evidence of infiltrative or neoplastic intestinal disease which is considered unlikely but cannot be ruled out without full thickness or endoscopic biopsies. The duodenum wall measured 0.45 cm width. The jejunum wall measured 0.50 cm width.

Normal visible colon wall layers were present with apparent formed feces in lumen.

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. No overt evidence of active pancreatitis or pancreatic neoplastic criteria was noted.

Free Abdomen

Moderate to significant volume primarily anechoic free fluid was noted, as well as generalized hyperechoic mesentery. No omental masses or evidence of lymphadenopathy was noted.

ULTRASONOGRAPHIC FINDINGS

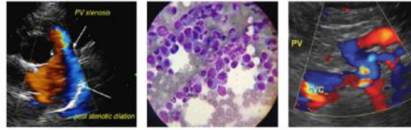
- Enteropathy exhibiting generalized mucosal fogging to intermittent hyperechoic mucosal striations - consistent with protein-losing enteropathy
- Moderate to significant volume primarily anechoic free fluid, generalized reactive mesentery
- Sonographically unremarkable liver without evidence of congestive criteria
- Mild chronic renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Considerations for the small intestine may include IBD and lymphangiectasia, as primary considerations while the possibility of infiltrative neoplasia, although thought less likely, cannot be definitively excluded. Intestinal biopsies would be required for a definitive diagnosis, yet contraindicative if albumin levels <2.0. Some or all of the following protocol are recommended empirically.

Prophylactic abdominocentesis could be considered, given significant peritoneal free fluid or if evidence of abdominal discomfort. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

Part or all of this protocol may be considered based on your clinical impression of the patient:
OBJECTIVE: keep albumin levels > 2 g/dl, avoid thromboembolism and cavitary effusions, monitor concurrent PLN (Wheaton Terrier PLE/PLN) and liver disease:
Plasma 10 mL / kilogram IV over 4 hours
Or **Human albumin** 2 ml/kg/h over 10 hours. Total daily volume 20.l/kg/day



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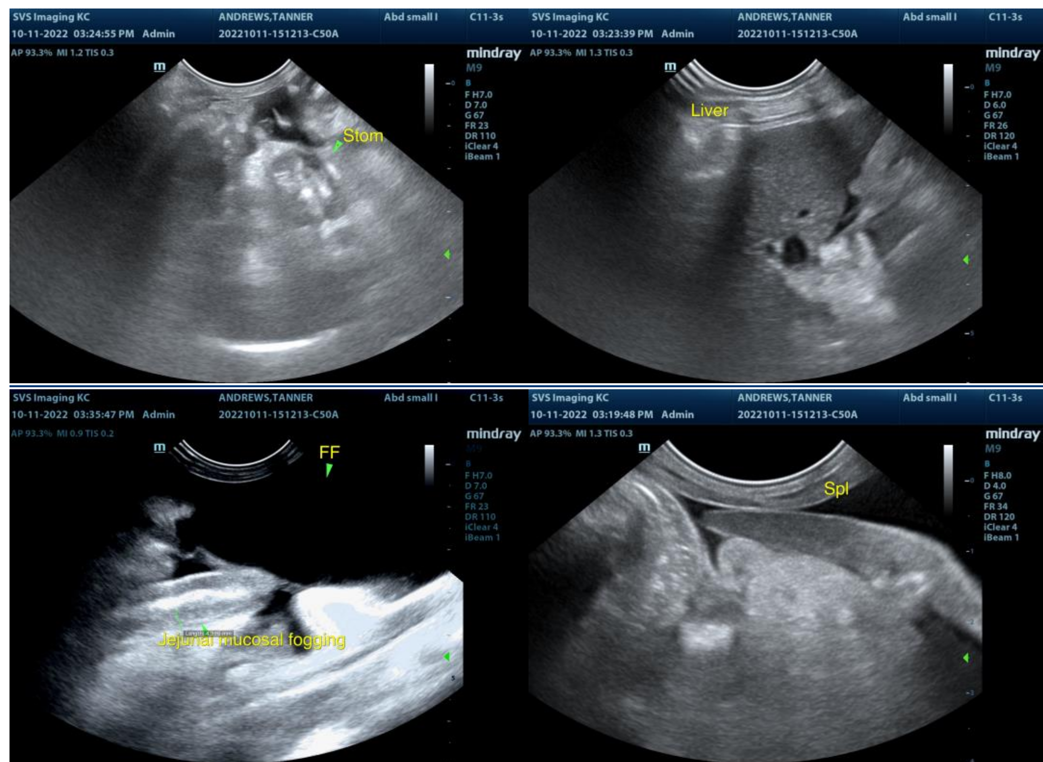
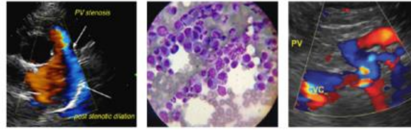
And Colloids/Hetastarch
10 to 20 mL per kilogram per day and dogs
10 to 15 mL per kilogram per day cats
(Can bolus first 1/3 of dose over 15 minutes)
& maintain on LRS maintenance otherwise.
Metronidazole (10-20 mg/kg po bid)
Famotidine 1 mg/kg Iv Im po dc Sid /bid
Sucralfate 0.5-1 g po tid dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid
Diet: Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal Canine HP or similar.
Prednisone or prednisolone 2 mg/kg bid x 3-5 days then 2 mg/kg sid. **Chlorambucil** in refractive severe IBD/alimentary lymphoma cases (monitor cbc for rare bone marrow suppression) 4 mg/m^2 Q 24-48 hours.
Cobalamine (B12) 250-1500 ug/dog weekly x 6 weeks.
Calcium supplementation if necessary.
Aspirin 0.5-1 mg/kg/day **or Clopidrel** (Plavix) 1-5 mg/kg/day.





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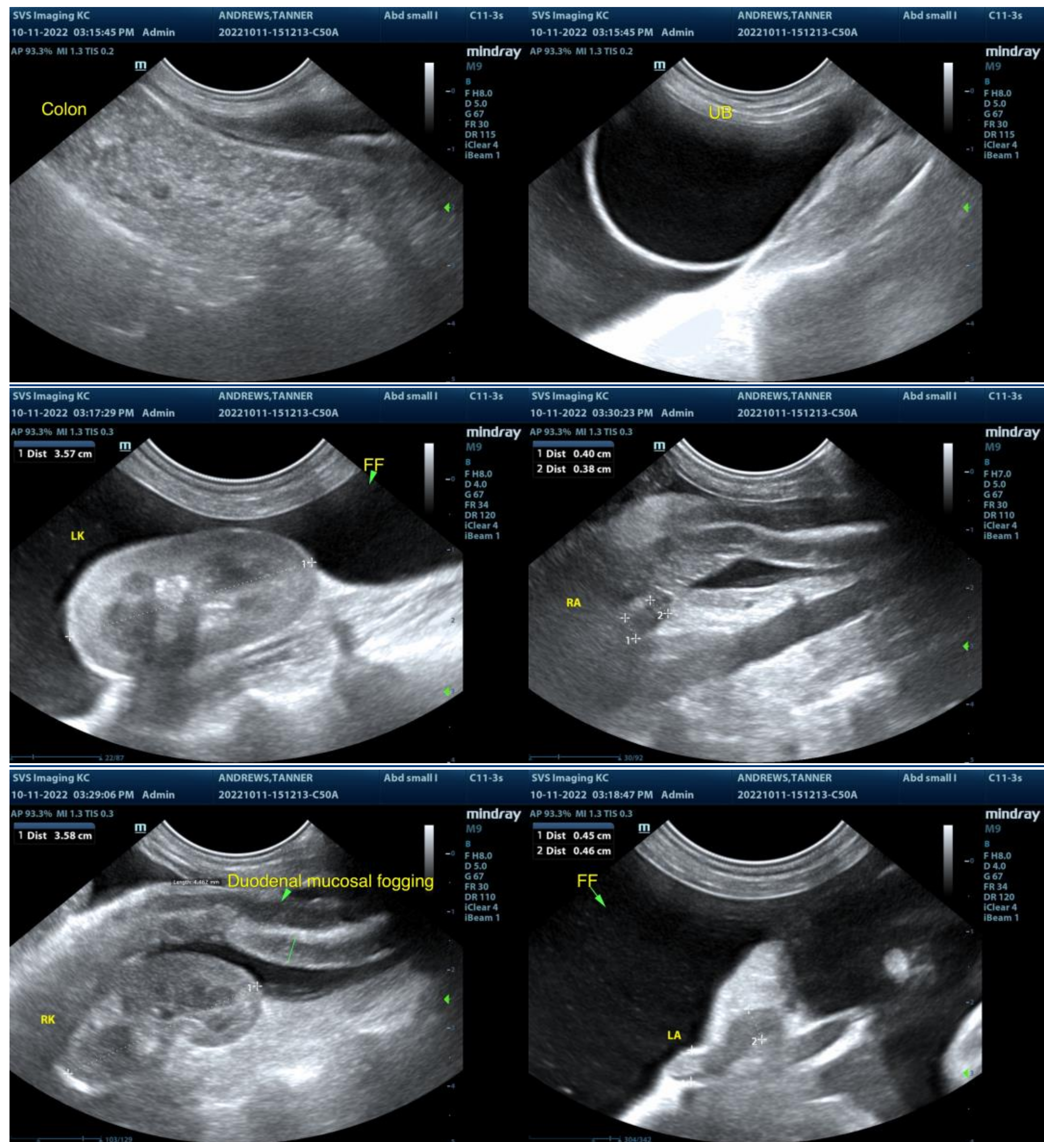

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com