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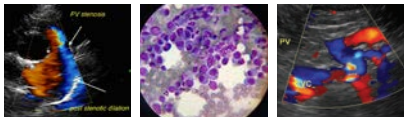

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

9/8/22

PATIENT

Sona Copps

SPECIES

Canine

BREED

Yorkie

SEX

Spayed Female

AGE

11/24/07

WEIGHT

4.7 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Stephanie Warga RDCS, RVT

HOSPITAL NAME

Everhart Vet Hospital

REFERRING VET

Dr. Keys

INVOICE

41168

PRESENTING CLINICAL SIGNS

Pet has CRD that is being maintained on SWF, phos bind, Herbals and was on Kidney diet. Pet has been having frequent, intermittent bloody diarrhea or melena. Amyl will significantly increase at the time. Comes back down. ALB has been slowly declining. Significant BUN elevations. Suspect with elevated phos, mild elevation Crea - partial renal, partial GI and partial yorkie syndrome.

Current Medications: Used chronically prn Metronidazole 100mg/ml -
cerenia 16mg - 1/4 t up to sid prn, omeprazole 5mg sid, Vit B12 (just started this week)- 0.25mls once weekly then q 2-4 weeks, phos bind - 1 large scoop with each meal.
Lab Results: Labs from 8/31 when doing better BUN151, Crea 1.9, phos 6.3, amyl1,609, mg 2.6, normal cbc. Labs from week earlier when pet was having GI flair (in house)- BUN 108, Crea 1.7, phos 5.6, amyl >4,000.

Date of Previous IntraPet Ultrasound: 9/2/21. See attached.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (2.66 cm) with pyelectasia at 0.49 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.21 cm) with mild pyelectasia at 0.31 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is borderline large measuring 0.41 cm at the cranial pole, 0.79 cm at the caudal pole, and 1.53 cm in length. It is observed in its normal position cranial to the left renal artery. It is slightly irregular in appearance in that the caudal pole is prominent. There is no evidence of vascular invasion. These measurements are very similar to previous measurements taken 9/2/21.

The right adrenal gland is normal in size measuring 0.34 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver
The liver is subjectively normal in size with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a small hypoechoic lesion visualized within the parenchyma measuring 0.67 cm x 0.78 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal
The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.36 cm. Jejunum wall measures 0.21 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Decreased corticomedullary distinction in both kidneys with bilateral pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

- Prominent caudal pole of the left adrenal gland – I suspect this is an incidental finding. Measurements are almost identical to the previous measurements taken 9/2/21.

- Large, hyperechoic liver with small, hypoechoic nodule – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy. The appearance of the hypoechoic lesion trends towards a benign lesion. Recommend continued monitoring.

- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The scan today is very similar to the previous scan performed on 9/2/21. The changes observed in the kidneys are consistent with chronic progressive renal disease, and the enlargement of the caudal pole of the left adrenal gland is stable.

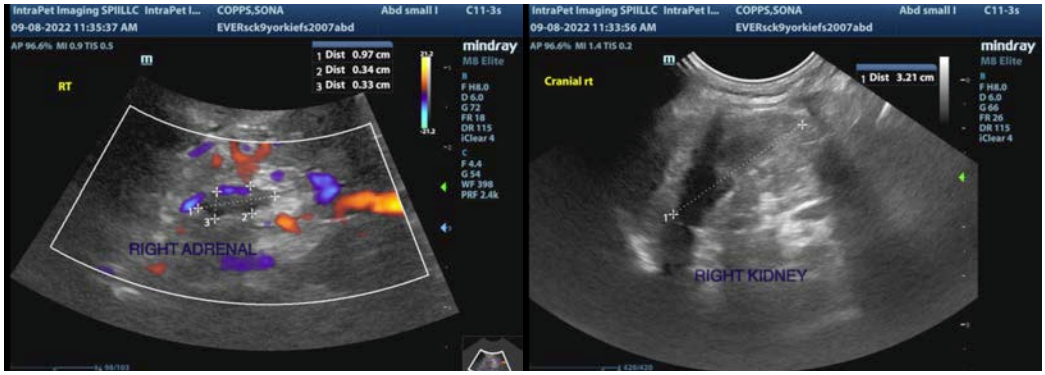
The liver is persistently large and hyperechoic. You could consider a liver function test to further evaluate the liver as a source of the low albumin. If liver function is abnormal, I would recommend a fine needle aspirate of the liver.

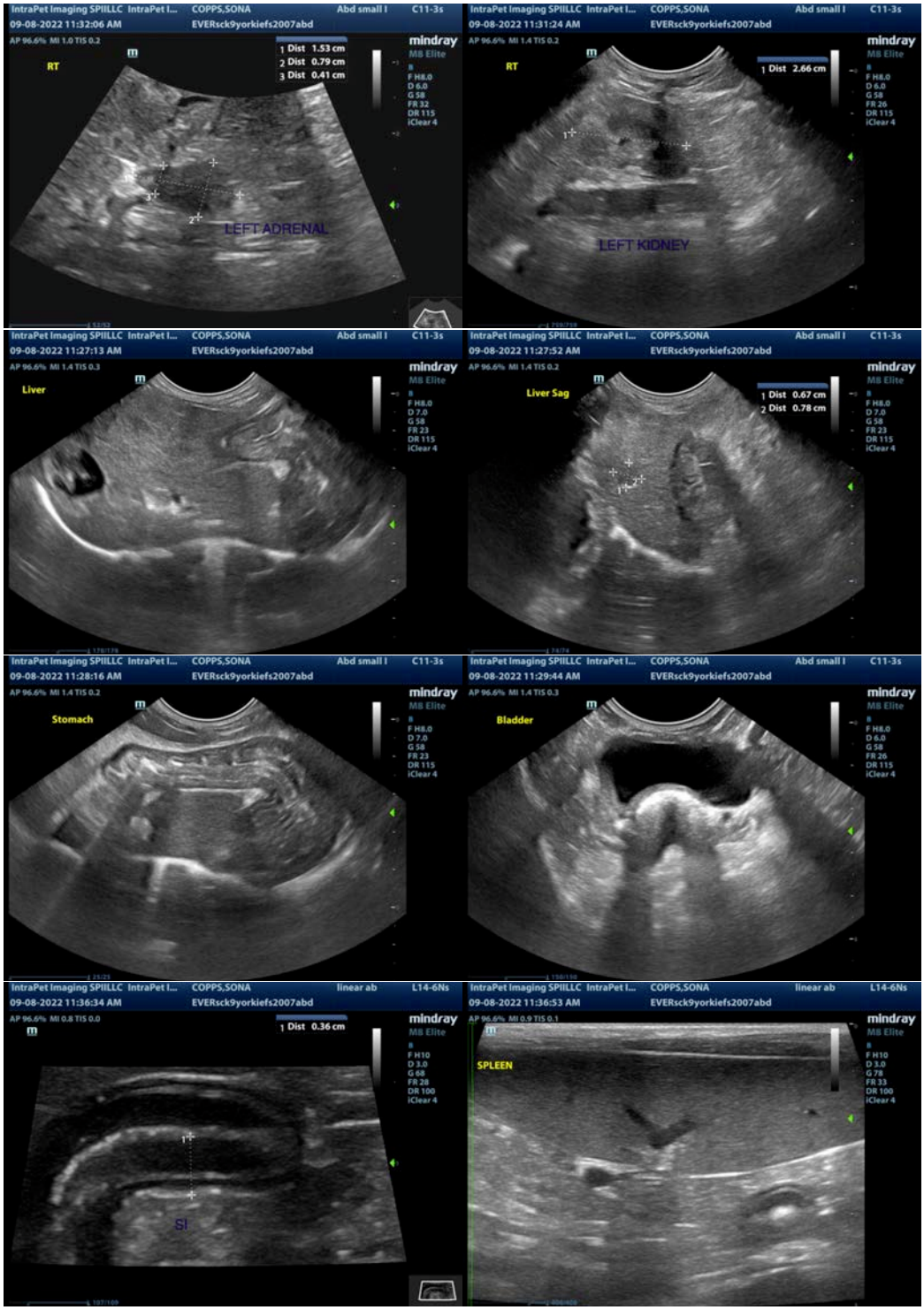
No focal bowel lesions are observed to explain the hypoalbuminemia and the bloody diarrhea reported. Unfortunately, there are many causes for diarrhea that cannot be definitively diagnosed by ultrasound alone, such as food allergy/dietary intolerance, dysbiosis, GI parasites, mucosal ulceration, infection, IBD, and some types of intestinal neoplasia. Consider the following:

- Recommend a novel protein/hydrolyzed protein prescription diet.
- Recommend chronic probiotic therapy.
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Recommend anti-ulcer therapy with Sucralfate and Omeprazole.

If symptomatic and dietary therapy is not helping, then you could consider upper and lower GI endoscopy to further evaluate for mucosal lesions, inflammation, infection, etc. Chronic Metronidazole use could potentially promote dysbiosis, so probiotics are important in this situation. I would also consider evaluating a urine protein to creatinine ratio to ensure that some of the low albumin is not attributed to protein loss from the kidneys.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

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RT
1 Dist 1.53 cm
2 Dist 0.79 cm
3 Dist 0.41 cm
LEFT ADRENAL
mindray
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RT
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LEFT KIDNEY
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Liver
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Liver Sag
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Stomach
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Bladder
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1 Dist 0.36 cm
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IntraPet Imaging SPIILLC IntraPet I... COPPS,SONA linear ab L14-6Ns
09-08-2022 11:36:53 AM EVERsck9yorkiefs2007abd
SPLEEN
mindray

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.

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