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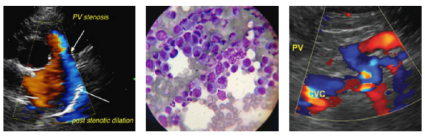
fredgromalak@gmail.com



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PATIENT

CC Shell

SPECIES

Canine

BREED

Retriever X

SEX

Spayed Female

AGE

6 Years 1 Month

WEIGHT

51.5 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Lake Mills Vet Clinic

INVOICE

36756

DATE

4/6/22

PRESENTING CLINICAL SIGNS

Presented for decreased appetite and melena about 3 weeks ago. Bloodwork revealed an anemia. Started on prednisone. Melena resolved. Appetite returned to normal. Recheck bloodwork has revealed a persistent anemia. On 3/30/22 mass was noted by owner on the left caudal thigh. Cytology was consistent with a MCT. Currently receiving Prednisone (20mg AM/10mg PM) and cyclosporine 50 mg BID (started 3/30/22).

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 (5.1 cm) with moderate sized, shadowing, non-obstructive nephroliths. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.51 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.61 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.47 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. There is a mixed echogenic nodule visualized towards the head of the spleen measuring 0.79 cm x 1.29 cm.

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. 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. On one image of the liver, there is the suspicion of

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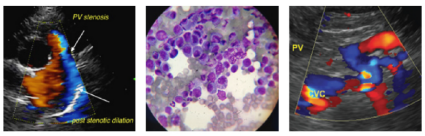

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a somewhat thickened bowel loop. I suspect this would be pylorus. The bowel in this area measures 0.7 cm, and visualization is limited.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. Jejunum wall measured 0.41 cm. Duodenum wall measured 0.42 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

- Mixed echogenic nodule visualized within the spleen – There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. This could be consistent with a steroid hepatopathy.

- Thickened small intestine with questionable focal upper GI bowel thickening – The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease). The suspected thickening is very briefly visualized, and cannot be confirmed.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The combination of a microcytic, hyperchromic anemia, hypoalbuminemia, and melena is highly suggesetive of upper GI ulceration and bleeding. The microcytosis is consistent with an iron deficiency anemia, secondary to the chronic hemorrhage. Possible differentials to consider would be metabolic disease such as Addison's disease or liver disease, underlying neoplasia, chronic foreign bodies, or primary GI ulceration (this would be rare and most commonly seen with NSAID use, etc.). It is unclear if the Prednisone was started for a suspected immune mediated hemolytic anemia(?), as I did not see evidence of this in the history provided. The recommendations for an iron deficiency anemia secondary to blood loss would include:

- Consider confirming low iron levels by measuring serum iron levels.
- If they're confirmed as low, consider supplementing iron.
- Recommend anti-ulcer therapy.
- Taper off the Prednisone or any other medications that could exacerbate ulceration.

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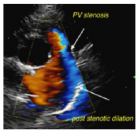

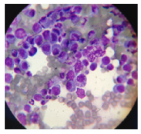
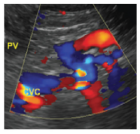

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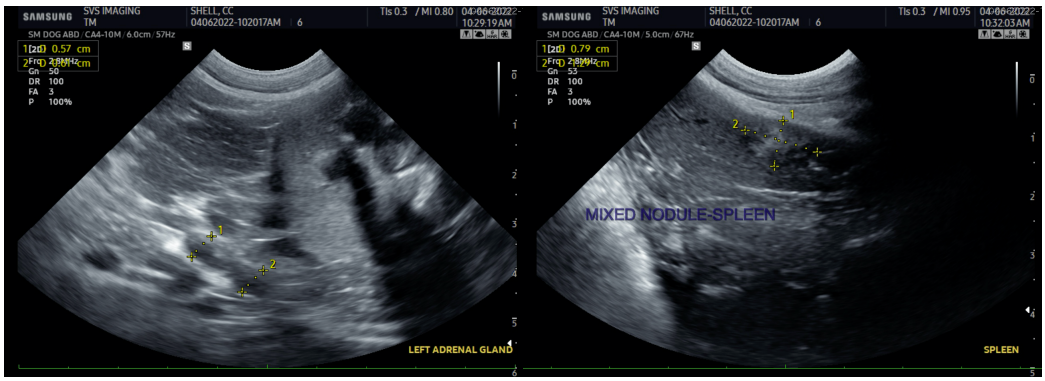
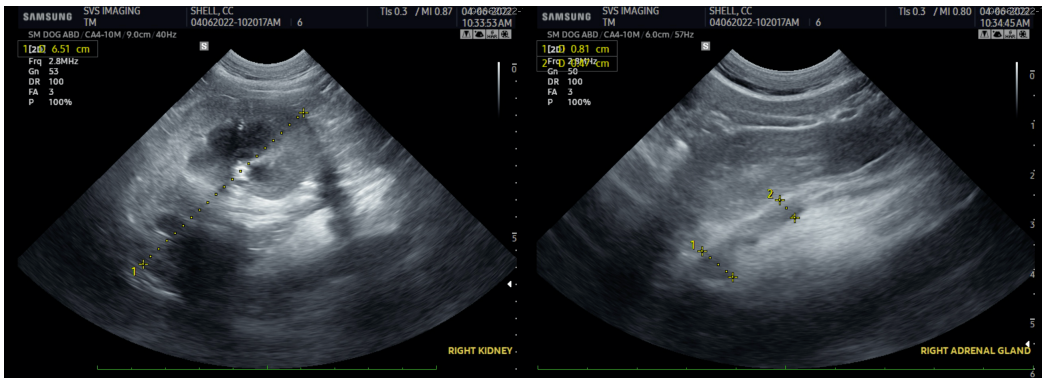
- As no focal GI lesions were discretely visualized, options would include a contrast CT scan to better visualize the bowel and abdominal contents, repeat imaging after off of steroids for several weeks in case this has induced some mass lesions to be less visible, re-scanning with a higher resolution machine to possibly visualize mucosal abnormalities, etc.

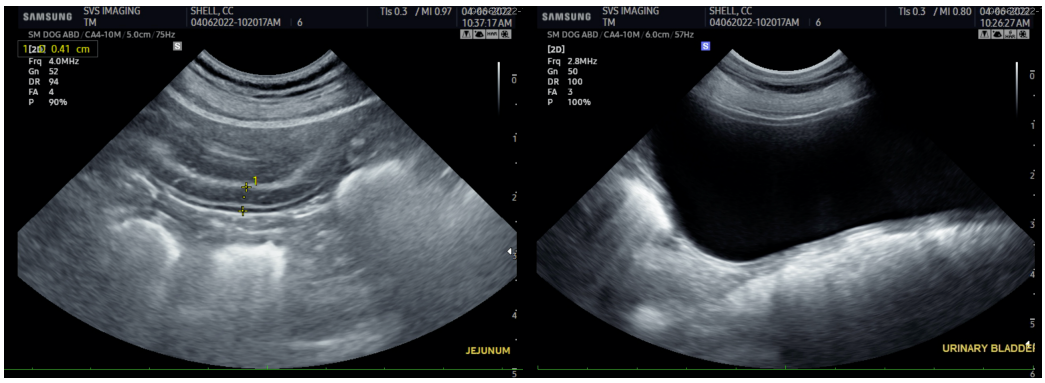
My concern is that an obvious cause for the GI bleeding has not been identified. Consider an upper GI endoscopy to at least evaluate the stomach and proximal duodenum.

GI hemorrhage and ulceration has been seen secondary to mast cell tumors, but this is relatively rare, unless this is a very large mass causing systemic signs.

There is a small nodule visualized in the head of the spleen. Consider fine needle aspirate for further evaluation.







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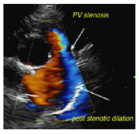

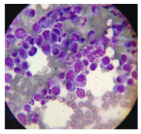

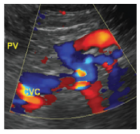

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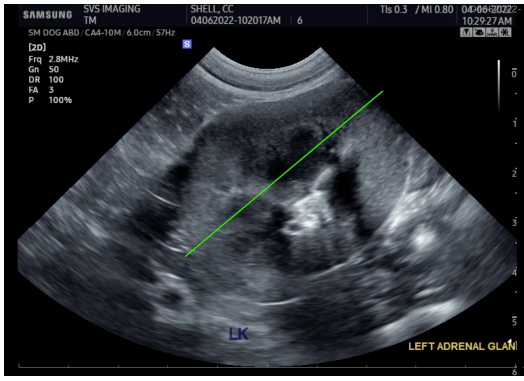

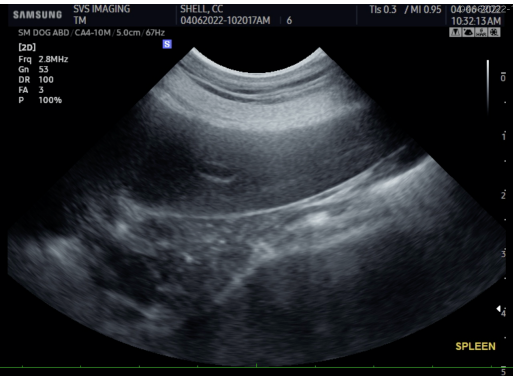

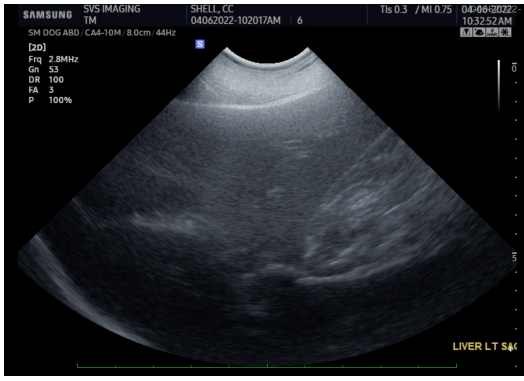

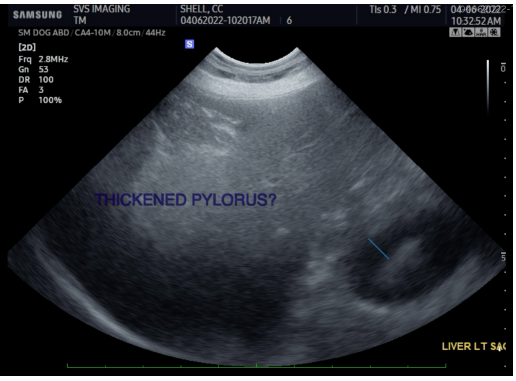

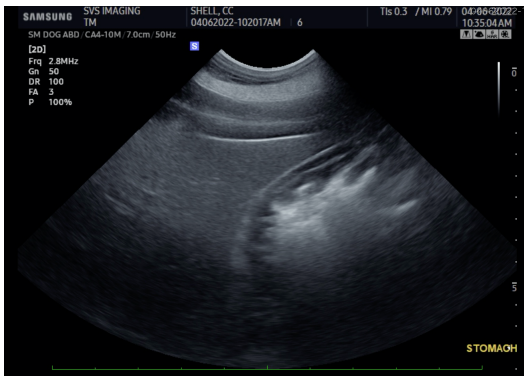

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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