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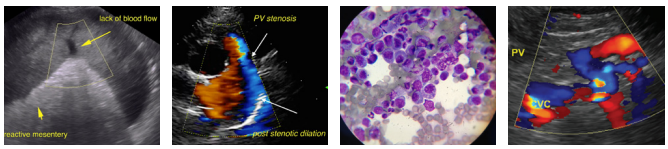

PATIENT

Annie Malloy

SPECIES

Canine

BREED

Mixed

SEX

Spayed Female

AGE

14 Years 4 Months

WEIGHT

19.4 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Sorbo

HOSPITAL NAME

Back Bay Vet Clinic

REFERRING VET

Dr. Sorbo

INVOICE

36479

DATE

3/25/22

PRESENTING CLINICAL SIGNS

Ongoing weight loss, reduced appetite, muscle wasting, hypometric and stiff gait, hindlimb ataxia, and (new today) forelimb proprioceptive deficit. Also hypothyroid and has dental dz and lenticular sclerosis. Abnormal PE/Chem/CBC/UA Results: BP 240mmHg(!) systolic on RF leg. Confirmed by three reads. Anemia, azotemia, elevated amylase, lipase. UPC 3.1. Labs attached for completion.

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 (4.2 cm) with pyelectasia at 0.27 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal. There are numerous punctate mineralizations/hyperechoic foci throughout the cortical tissue.

The right kidney has a normal shape and size with pyelectasia at 0.40 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal. Numerous punctate mineralizations are present rhoughout the cortex.

Adrenal Glands

The left adrenal gland is large in size measuring 1.5 cm at the cranial pole, 2.0 cm at the caudal pole, and 3.6 cm in length. It is observed in its normal position cranial to the left renal artery. It is fairly normal in appearance, but generally enlarged. There is no obvious evidence of vascular invasion.

The right adrenal gland is large in size measuring 0.87 cm at the cranial pole, 1.4 cm at the caudal pole, and 2.53 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is generally normal in appearance other than it is enlarged. There is no evidence of vascular invasion.

Spleen

The spleen is subjectively normal in size. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No overt masses or nodules are visualized, but there are punctate mineralizations/hyperechoic foci throughout the parenchyma.

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.

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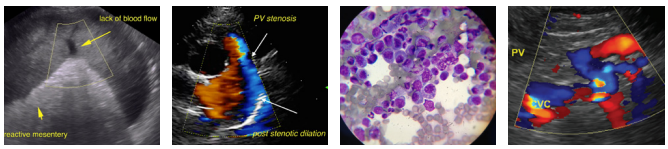

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Gastrointestinal

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 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. 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 prominent and hypoechoic as compared to the surrounding isoechoic 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 appears generally increased in echogenicity, and there are small punctate mineralizations/hyperechoic foci through much of the abdominal structures.

ULTRASONOGRAPHIC FINDINGS

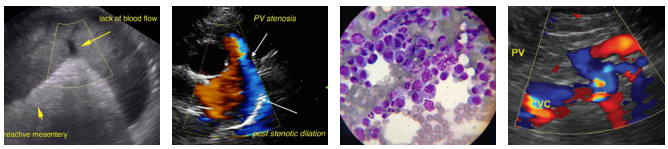
- Bilateral adrenomegaly – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.

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

- Mildly mottled spleen with punctate pinpoint mineralizations – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis. This may be a normal finding in this individual.

- 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.

- Subjectively thickened small intestine – 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).



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- Prominent, hypoechoic pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

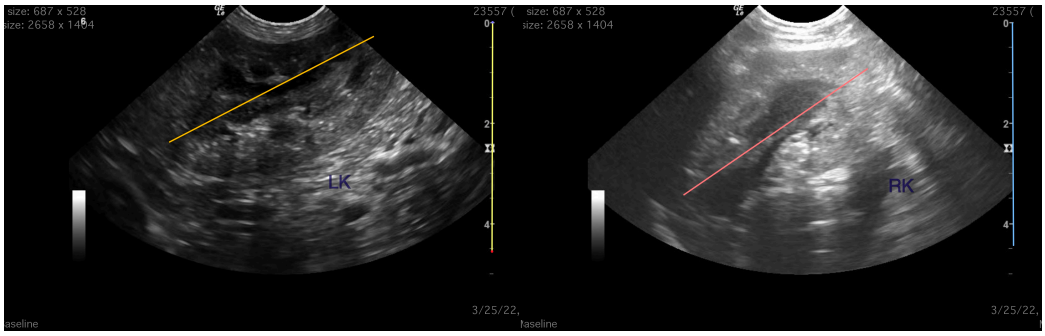
An obvious cause for the weight loss and decreasing appetite is not visualized. There is a generalized increase in the echogenicity of the mesentery, indicating inflammation in the abdomen. The pancreas does not appear severely inflamed, but this does not always correlate with clinical signs. Consider a GI panel to Texas A&M with quantitative PLI, TLI, cobalamin and folate to further evaluate the pancreas and small intestine. Additionally, based on historical information provided, this pet has a microcytic hypochromic anemia, which could be consistent with an iron deficiency anemia, most commonly due to GI blood loss. Look for evidence of melena, GI parasitism, etc. Small intestinal masses or ulcerative lesions are not always seen with ultrasound.

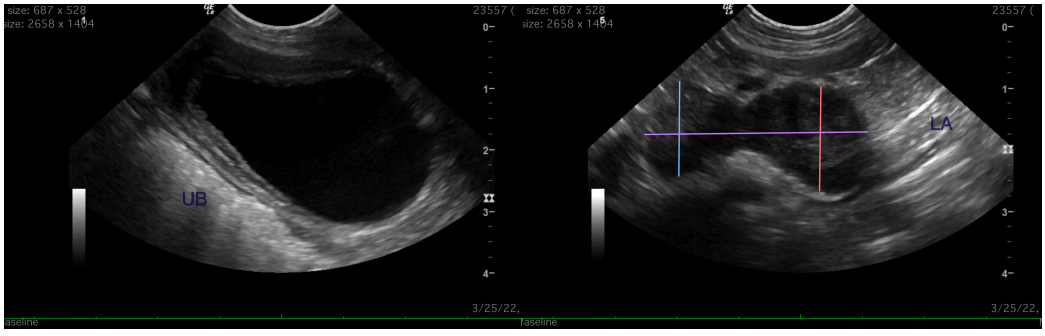
Bilateral adrenomegaly is present. This would be most commonly associated with pituitary dependent hyperadrenocorticism, although infiltrative neoplasia, etc. is possible. Correlate with clinical signs. If this patient does or has had signs of Cushing's in the past, then adrenal function testing could be considered when she is feeling better.

Both kidneys have decreased corticomedullary distinction and dilated renal pelvises. This could be secondary to PU/PD, but consider urinalysis and culture to screen for pyelonephritis. Additionally, the renal disease or adrenal disease could be a source for the hypertension reported. There is a protein losing nephropathy present. Recommend treatment for the hypertension and consider a platelet inhibitor (not aspirin in this situation) as there is a risk for thromboembolic disease.

There is a lot going on this dog, including renal disease, adrenal disease, suspected gastrointestinal disease. consider supportive care for GI ulceration, treatment for the protein losing nephropathy, and if symptoms persist or there is melena present or low serum iron levels, you could consider GI endoscopy.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.





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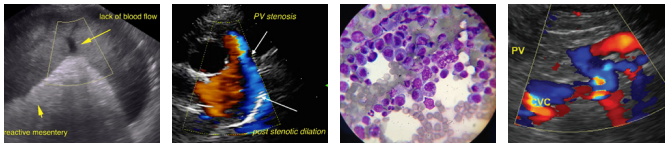

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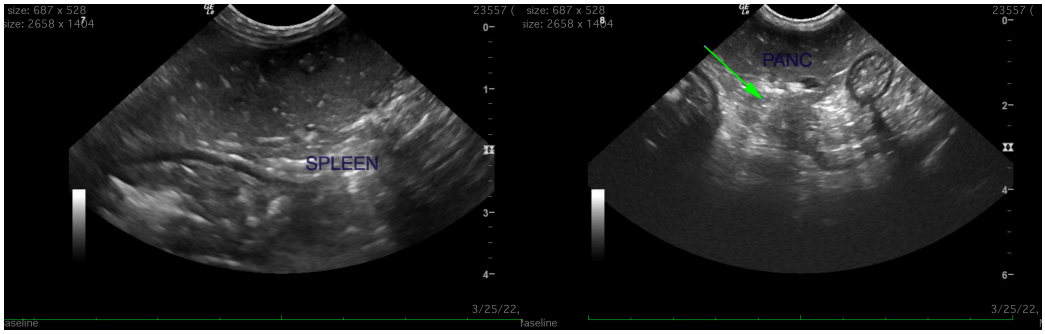

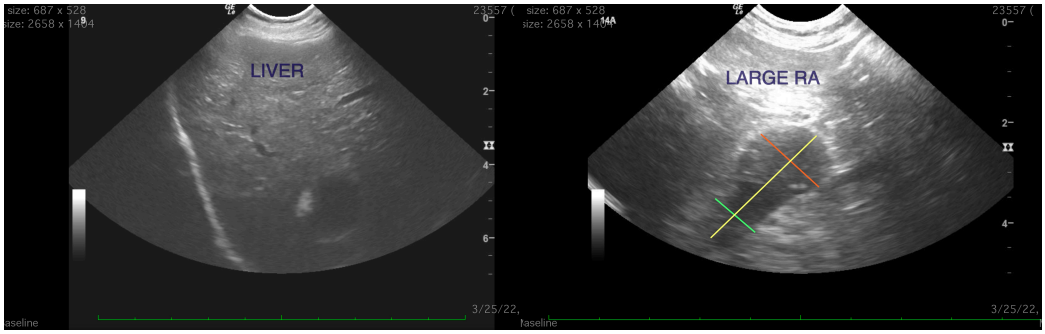

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

kathleen.sennello@sonopath.com