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Clinical Sonography & Telecytology
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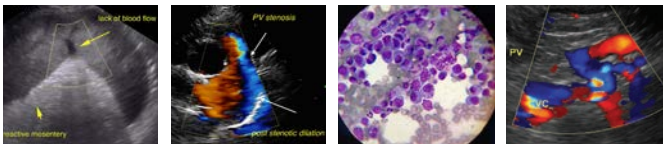


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Sully Johnson

SPECIES

Canine

BREED

Siberian Husky

SEX

Neutered Male

AGE

2 Years

WEIGHT

56.6 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Jack Reese

HOSPITAL NAME

Willow Run VC

REFERRING VET

Dr. Gwenna Brubaker

INVOICE

24598

DATE

8/12/21

PRESENTING CLINICAL SIGNS

Several month history of diarrhea, unresponsive to treatment. Constant, loose, water stools. Normal appetite, behavior, demeanor. Bloodwork, multiple fecal exams, maldigestion panel largely unremarkable. Unresponsive to dietary trial (Purina HA), tylosin, metronidazole, empirical deworming (Panacur). Owners supplemented with cobalamin with no improvement
Abnormal PE/Chem/CBC/UA Results: Maldigestion panel - low cobalamin, no other significant changes Normal physical exam Multiple negative fecal exams General bloodwork unremarkable

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 visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (6.4 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.

The right kidney has a normal shape and size (6.5 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/small in size measuring 0.21 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.

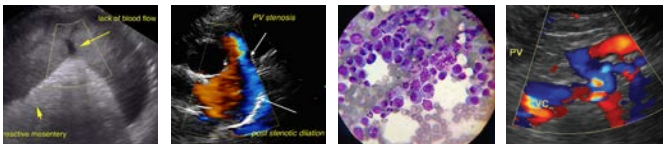
Spleen

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. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture and slightly hypoechoic. Portal markings are hyperechoic. 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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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. Duodenum wall measured 0.51 cm. Jejunum wall measured 0.33 cm, 0.38 cm, 0.45 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. There is a mild lymphadenomegaly present. A mesenteric lymph node was observed measuring 0.6 cm. 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.

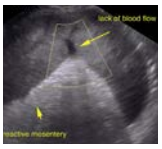
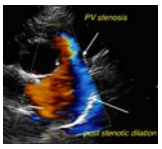
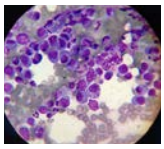
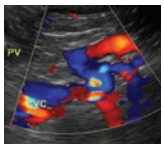
ULTRASONOGRAPHIC FINDINGS

- Prominent, hypoechoic pancreas with surrounding hyperechoic mesentery – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Mildly hypoechoic liver – If liver values are normal in this patient, then this is likely an incidental finding. If liver enzymes are elevated, consider infectious, inflammatory or infiltrative disease (less likely).
- 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).
- Mild mesenteric lymphadenopathy – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely. This is a common finding in younger dogs.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes observed were very mild and could possibly be normal for this patient. Recommend ruling out possible metabolic causes by performing an ACTH stimulation test, current bloodwork (if not already done), and rechecking B12, folate and TLI if this has not been done in the last 3-4 months.

A cobalamin deficiency was reported. This is an indicator of small intestinal disease. Supplementation will not treat the diarrhea, but does help with overall health, and helps pinpoint the problem as most

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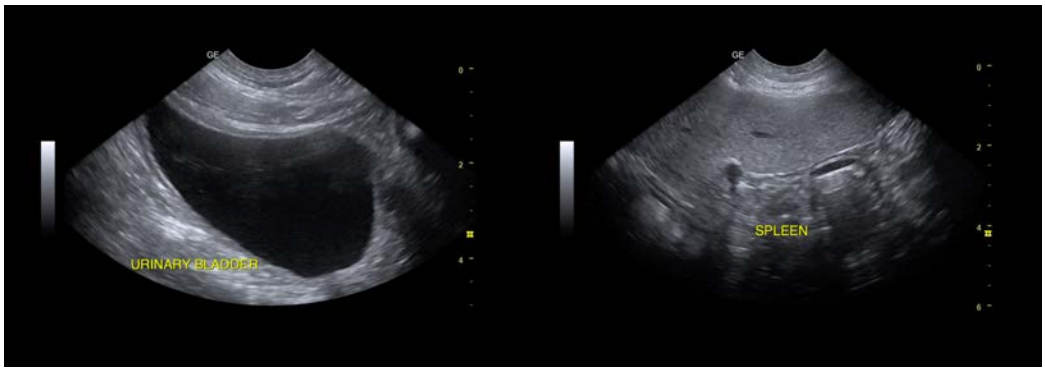
likely a primary GI disorder. It seems likely that you have ruled out GI parasitism. The pancreas is prominent, but if lab work is normal and the patient is feeling good, pancreatic disease seems less likely. I feel this leaves dysbiosis, food allergy, IBD, and much less likely intestinal neoplasia as possibilities. If the patient has a history of broad-spectrum antibiotic use, dysbiosis would be higher on my list of differentials.

Recommend reinstituting B12 therapy if B12 levels are subnormal. Consider a strict diet trial with a different novel protein or hydrolyzed protein diet. You could consider a Tylosin trial. If ACTH stim results are normal, and these steps are not helpful, then I would consider referral to a veterinary internal medicine specialists for evaluation of upper and lower GI endoscopy or surgical GI biopsies and consultation regarding a fecal transplant. In dogs this young, dietary sensitivity, parasites, and dysbiosis would be most likely.



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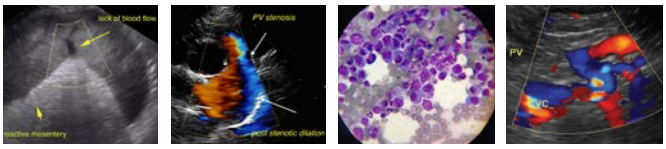

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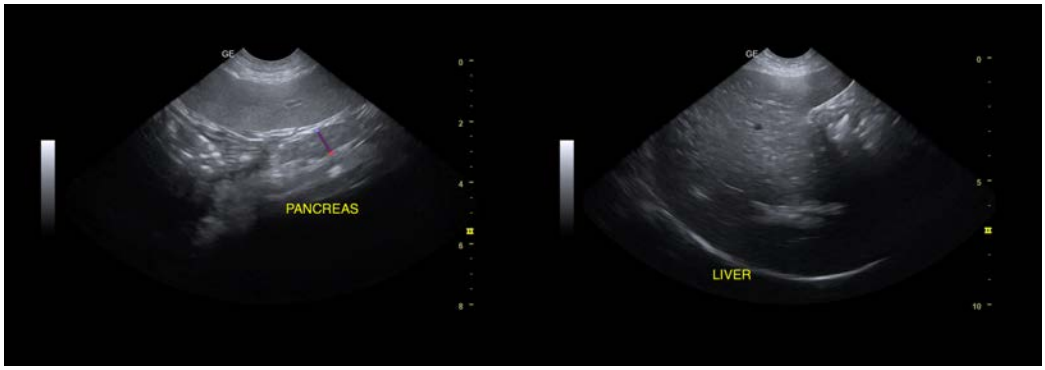

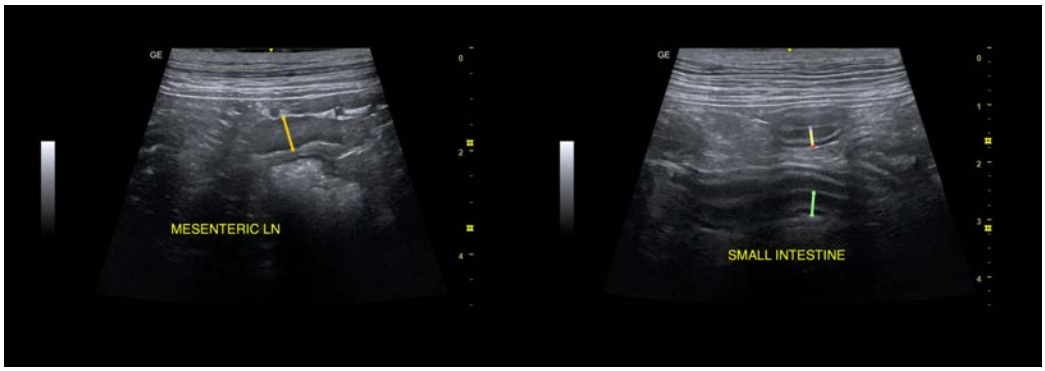

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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