

**DATE PRESENTING CLINICAL SIGNS**

3/15/22

Vomiting since last night and diarrhea with blood - before vomiting urine was noted to be darker with spots of blood. No dietary indiscretion. Not a known eater of things. Fenced in yard - unsure of toxin exposure but nothing in the house.

PATIENT

Willow Hall

Current Medications: Clavamox, Cerenia, Omeprazole, Gabapentin.
Lab Results: See attached.

SPECIES

Canine

Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

BREED

Dachshund

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.

SEX

Spayed Female

The left kidney has a normal shape and size (5.6 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

AGE

3/13/11

WEIGHT

17.5 Pounds

The right kidney has a normal shape and size (5.17 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is large in size measuring 0.89 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.

IMAGING PERFORMED BY

Rachel Brilhart RDMS

The right adrenal gland is large in size measuring 0.92 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.

HOSPITAL NAME

Animal Emergency
Hospital

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 focal parenchymal abnormalities are visualized.

REFERRING VET

Dr. Nacke-Horney

Liver

The liver is large in size 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. There is a somewhat ill-defined mixed echogenicity mass effect in the right side of the liver measuring 4.9 cm x 4.95 cm.

INVOICE

36194

The gallbladder lumen is significantly distended measuring 6.84 cm x 3.75 cm. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is moderate intraluminal debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is mild/moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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 mottled 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

There is no free fluid. There is a prominent mesenteric lymph node visualized at the level of the ileocecal junction measuring 1.53 cm, and the omentum is generally of normal echogenicity.

PRIMARY FINDINGS

- Large, heterogeneous liver with mixed echogenicity mass effect on the right side – 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. The visualized mass effect could represent a benign or neoplastic lesion.
- 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.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Mild mesenteric lymphadenopathy – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

SECONDARY FINDINGS

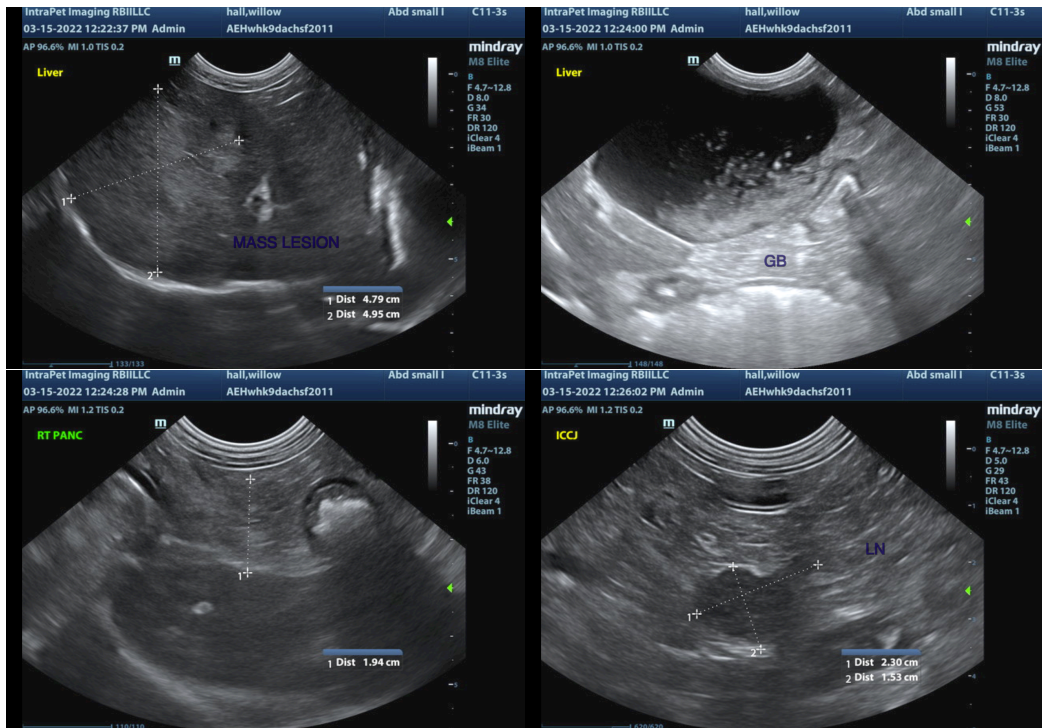
- Decrease corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Distended gallbladder with echogenic intraluminal debris – The gastric distension and hypomotility could be consistent with focal ileus or a proximal duodenal obstruction.

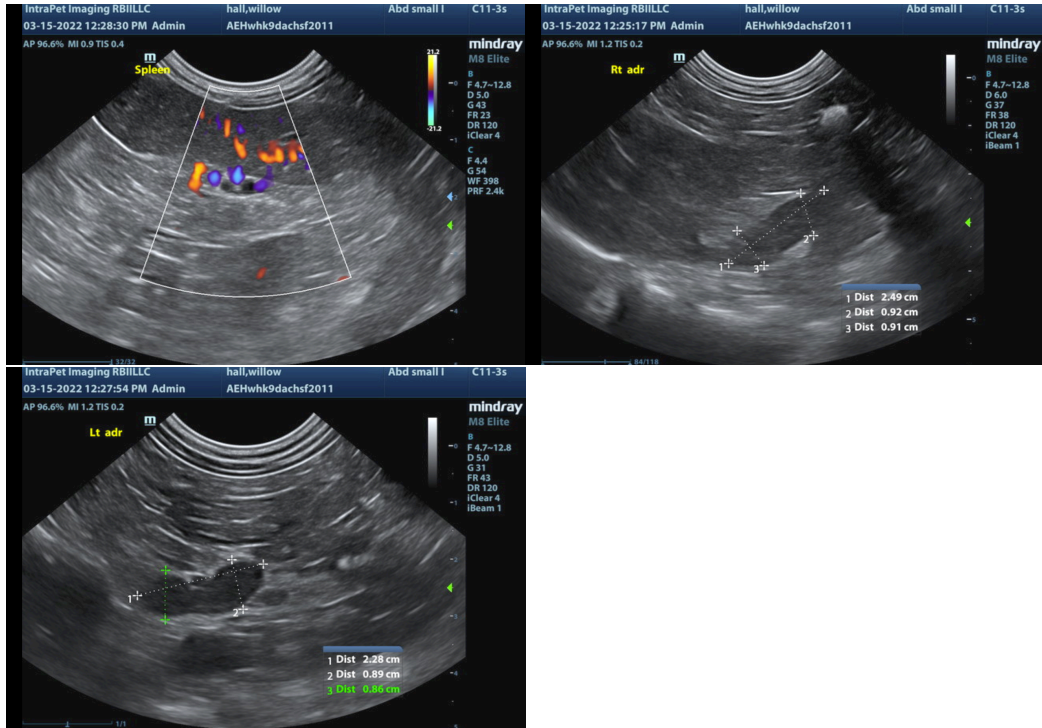
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There are no intestinal lesions visualized to explain the vomiting and bloody diarrhea reported. There is a small amount of shadowing material and gas within the gastric lumen. Correlate with feeding history and abdominal radiographs. Possible differentials would be delayed gastric emptying or less likely intraluminal foreign material. Many of the changes observed are likely associated with an older pet and unrelated to the symptoms reported. The liver is large and irregular with a mass lesion, and the adrenals are on the large side of normal. This could be consistent with early or current Cushing's disease. There is a moderate amount of gallbladder debris present. This should be monitored, but does not appear to be causing a problem at this time.

Recommend symptomatic therapy for acute hemorrhagic gastroenteritis with close monitoring and re-imaging if not responding to therapy (radiographs +/- ultrasound). The pancreas is prominent, but does not appear overtly inflamed. Consider quantitative PLI testing and concurrent treatment for pancreatitis. Additionally, recommend baseline chest radiographs. Once this has improved, if desired you can loop back and consider advanced imaging of the liver to evaluate for possible surgical removal of the liver mass, and a fine needle aspirate of the liver, and adrenal function testing if signs of Cushing's are present.

A prominent lymph node is visualized near the ileocecal junction, which I suspect is secondary to the inflammation in the GI tract. Consider continued monitoring of this lymph node.





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