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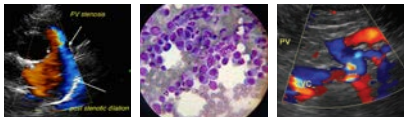

SonoPath

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DATE

8/3/22

PATIENT

Elber Macaroni Dewberry

SPECIES

Canine

BREED

Beagle X

SEX

Neutered Male

AGE

5/5/13

WEIGHT

39 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Stephanie Warga RDCS, RVT

HOSPITAL NAME

Frederick Road VH

REFERRING VET

Dr. Beyer

INVOICE

40130

PRESENTING CLINICAL SIGNS

Hematochezia, weight loss. History of proteinuria and elevated triglycerides, today has gallop rhythm, grade I/VI systolic murmur

Current Medications: Enalapril 10 mg BID, dasuquin, RC GI LF diet
this episode, metronidazole, proviable, gabapentin
Lab Results: elevated BUN, snap cpl normal, mildly elevated K, elevated ALP, low normal HCT, PCV/TS: 45%/6.9 g/dL.
Date of Previous IntraPet Ultrasound: No previous.
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 prostate is normal in size (0.94 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (7.3 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 (7.2 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 0.80 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 0.62 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 mildly 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 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 large, shadowing ingesta. 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. There is a large amount of irregular appearing, hard shadowing ingesta within the gastric lumen. Some of these areas measure approximately 2.8 cm on what appears to be a hard edge.

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 0.53 cm. Jejunum wall measured 0.36 cm. Visualized peristalsis appears appropriate. There are a few ingesta dilated bowel loops that show a subjective reduction in progressive motility with possible ileus(?).

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with nonformed 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

- Hard shadowing, irregular material visualized within the gastric lumen – Correlate with feeding history and abdominal radiographs. If the patient was adequately fasted, consider the possibility of ingested foreign material.

- Mildly 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.

- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

- Subjectively thickened small intestine with mild fluid dilation – 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).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large amount of hard shadowing material visualized within the gastric lumen. Correlate with abdominal radiographs and feeding history. If this patient was adequately fasted, consider fluid therapy and serial imaging to see if the stomach clears. If not, consider the possibility of ingested foreign material.

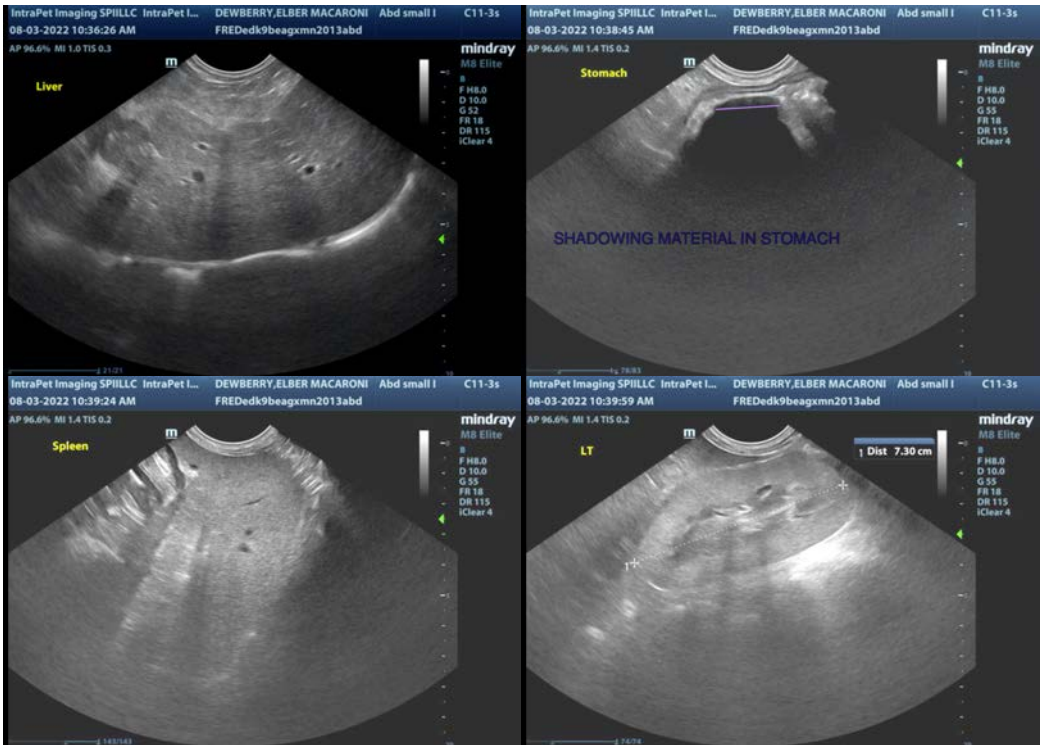
The changes observed in the liver are diffuse and non-specific. Options moving forward would include a liver function test, fine needle aspirate of the liver, or continued monitoring with Denamarin therapy.

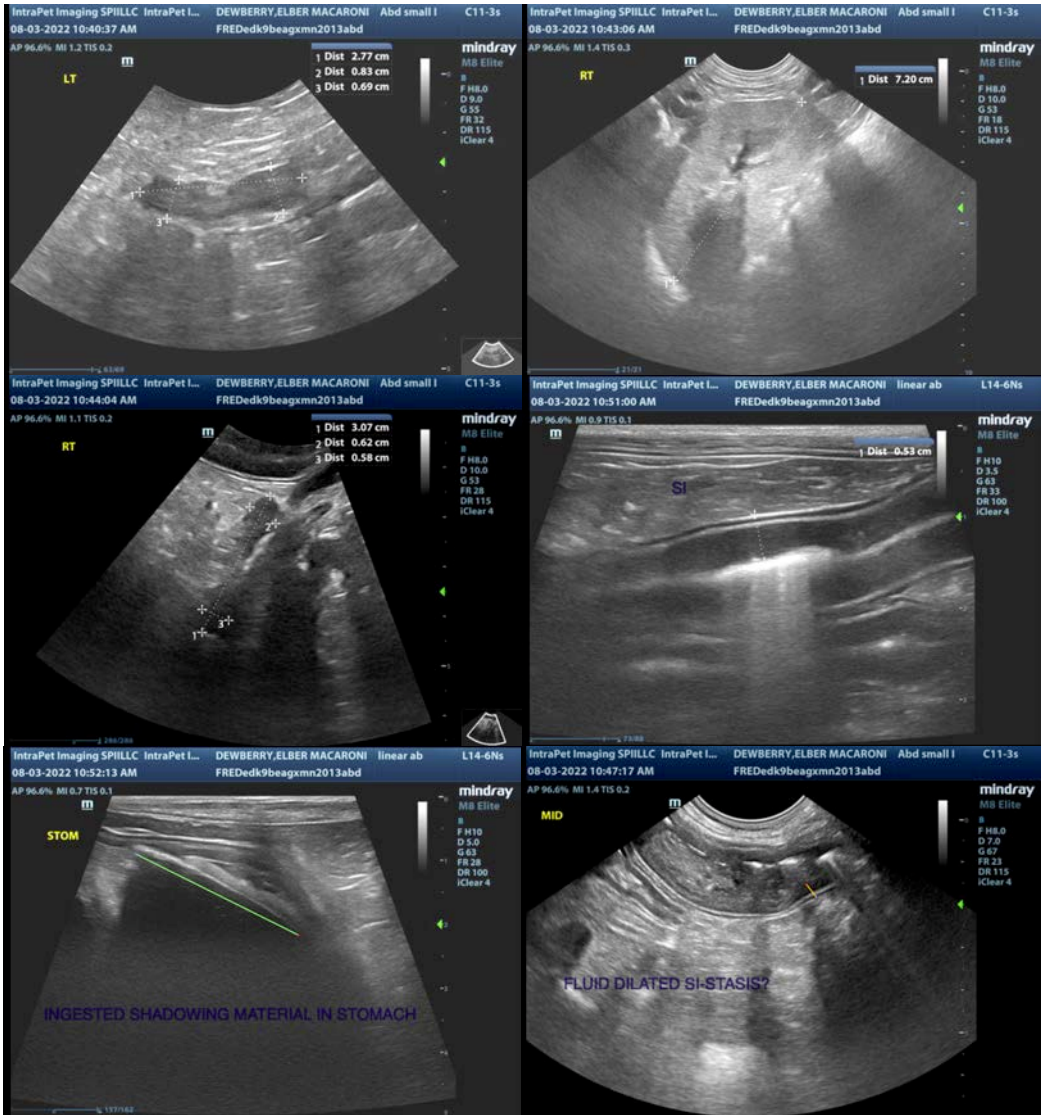
The small intestine appears subjectively thickened with some areas that are somewhat fluid/ingesta dilated. These have the impression of some ileus, possibly ingested foreign material(?).

No focal lesions are visualized on today's exam, but you get the general impression of underlying gastrointestinal disease (or foreign material?), possibly an associated hepatopathy, and the history reports proteinuria. Possible differentials for the hematochezia would include parasitic, infectious, inflammatory, and neoplastic changes. If this is not responsive to probiotics, dietary manipulation, etc., a colonoscopy may be necessary to better define the situation.

If weight loss is evident, this could be due to additional small intestinal disease, or secondary to the proteinuria, but I would consider evaluation of the upper GI tract as well if the large bowel is being evaluated. If the foreign material in the stomach does not pass and your clinical assessment is consistent with ingested foreign material, then biopsies should be obtained of the GI tract and liver if any invasive diagnostics are pursued.

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





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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