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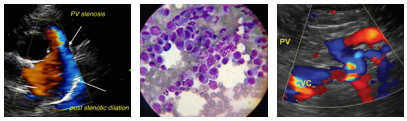

SonoPath
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DATE

3/2/22

PATIENT

Chloe Marino

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

2014

WEIGHT

5.6 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Kalwa

INVOICE

35852

PRESENTING CLINICAL SIGNS

Presenting Complaint: Vomiting with blood.

History: Date: 03-01-2022 Notes: Chloe is a 8 y/o FS Chihuahua who presents for vomiting blood and diarrhea - vomiting bile with blood starting 3 days ago, once a day - decreased appetite, eating some about 1/4 usual amount - lethargic - diarrhea on and off for 3 months, runny with mucus - No C/S, no change in urination - no known FB or toxin ingestion - diet: eats boiled chicken with carrots, other food available ad libitum - UTD on vax - 3 months ago had a similar episode Medications: - none, no preventatives

Assessment: Vomiting.
FB obstruction vs gastroenteritis (dietary indiscretion vs viral vs bacterial) vs metabolic disease (liver, kidney, endocrine) vs GI parasites vs pancreatitis vs other.

Current Medications: Pantoprazole (Protonix) 40mg/vial Injection, Fenbendazole Suspension 100mg/mL, Metronidazole Tablets 50mg, Proviable Kit (15ml Paste + 10 Capsules) - cats / small dogs (per kit), Proviable Capsules, Vitamin B12 1,000mcg/mL Injection, Pantoprazole (Protonix) 40mg/vial Injection, Proviable Kit - Feline/Small Dog, Dexmedetomidine (Dexdomitor) Solution 0.5mg/mL Injection, Butorphanol 10mg/mL.

Lab Results: Attached.

Radiographs: Xray Abdomen 2 View
Mild gas dilation of stomach, dilated colon or loop of small bowel, non-obstructive at this time, remainder of GI tract fluid filled and uniform appearance

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 contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (3.25 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (3.09 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is normal in size (1.4 cm long x 0.50 cm at the cranial pole and 0.50 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.5 cm long x 0.47 cm at the cranial pole and 0.48 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen
The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver
The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

GB is moderately distended with anechoic bile and gravity dependent echogenic sediment. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal
Gastric fundic mucosal hypertrophy with hyperechoic mucosa and some mucosal remodeling is noted. There is no loss of mural detail. Layering is normal. There is mild luminal fluid accumulation. No evidence of masses/nodules or foreign material present.

The visible small intestines are normal in wall thickness. Normal layering is maintained except for a diffusely disproportionately thick muscularis layer relative to the mucosa. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas
The pancreatic parenchyma is diffusely hyperechoic to surrounding tissue. The visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. Parenchyma is mildly coarse diffusely. There is no evidence of active peripancreatic inflammation or effusion.

Free Abdomen
There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

PRIMARY FINDINGS

- Diffusely thick muscularis relative to mucosal layer – This finding has been reported with infiltrative bowel disease including both benign inflammatory bowel disease as well as infiltrative neoplasia such as lymphoma.

- Gastritis – Microulceration cannot be ruled out.

SECONDARY FINDINGS

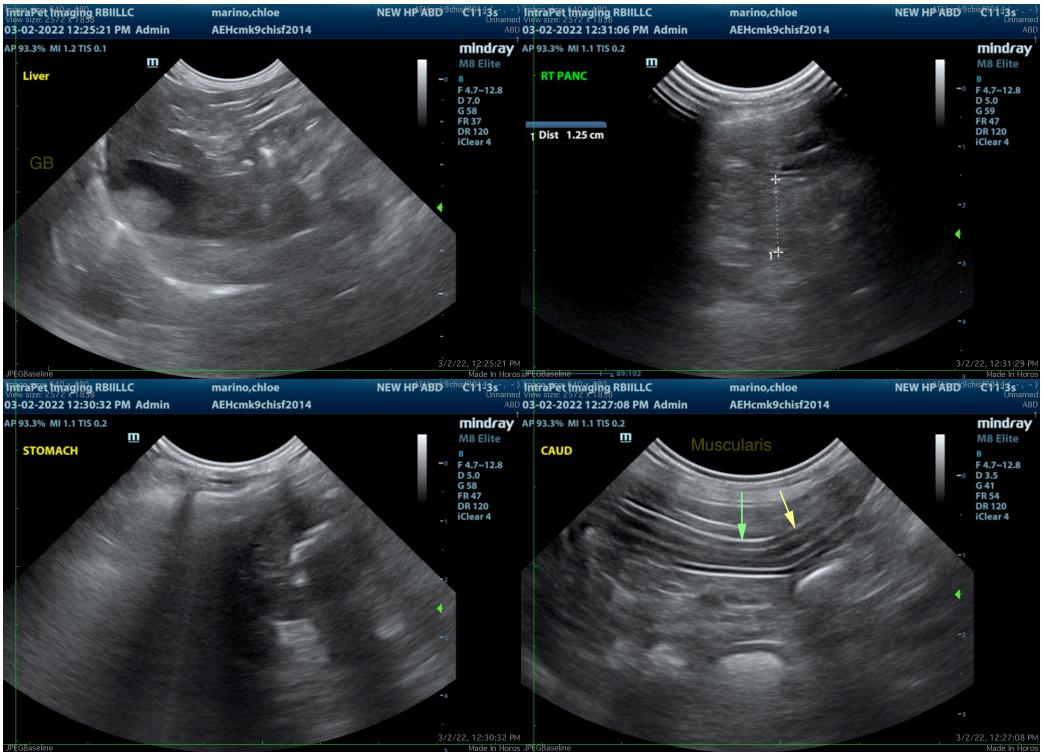
- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

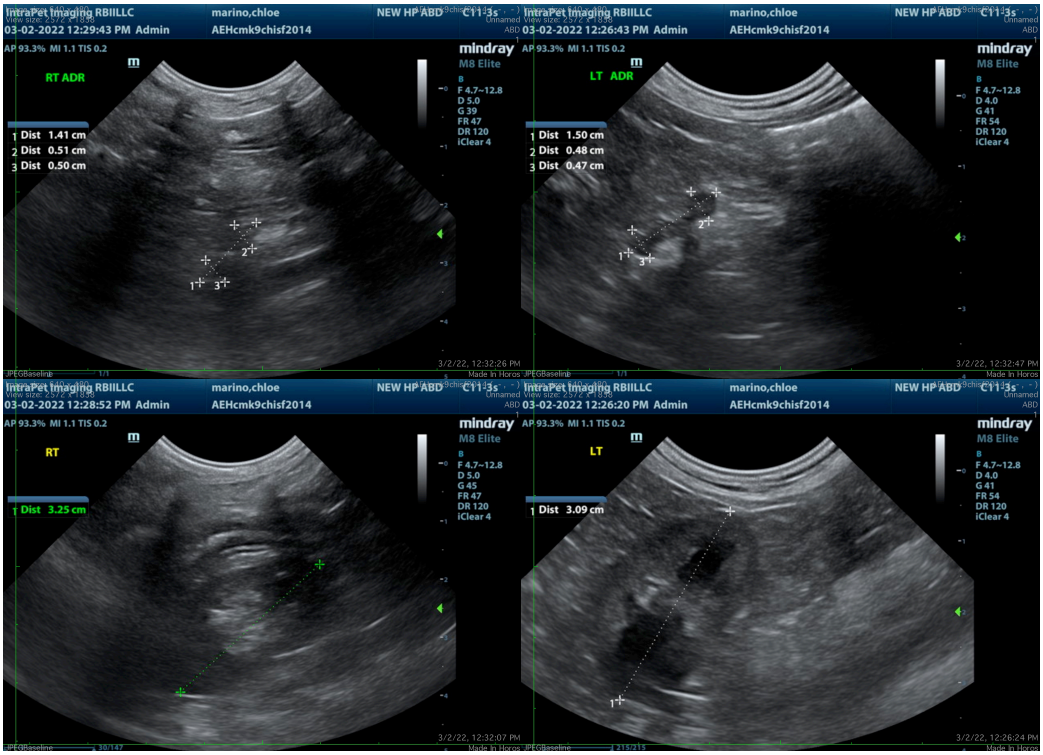
- Chronic pancreatitis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Top differentials for this patient's gastrointestinal signs (given the concurrent eosinophilia) include parasitic disease versus food allergy versus an eosinophilic infiltrative inflammatory bowel disease or hypoadrenocorticism. Infiltrative neoplasia is possible, but is considered less likely. Therefore, recommendations include a gastrointestinal malabsorption panel including TLI, PLI, folate and cobalamin to Texas A&M GI laboratory to further assess gastrointestinal function as well as a baseline cortisol level. If the baseline cortisol level is <2.0, a full follow up ACTH stimulation test is recommended to rule out hypoadrenocorticism.

Ultimately, biopsies of the gastrointestinal tract may be considered to definitively diagnose and therefore appropriately manage the underlying infiltrative bowel disease. In the meantime, empirical therapies to consider include empirical deworming with a 5-day course of Panacur, medical management of gastritis with antiemetics and gastroprotectants, including Sucralfate if not already being administered, and a transition in diet to a hydrolyzed protein diet.





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.

Beth Johnson, DVM, DACVIM
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