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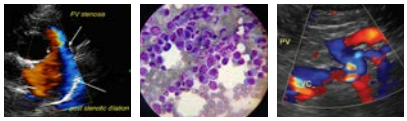

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DATE

1/4/22

PATIENT

Jax Ellers

SPECIES

Canine

BREED

German Shepherd

SEX

Neutered Male

AGE

7/3/16

WEIGHT

70.5 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Andi Parkinson RDMS

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Saubier

INVOICE

33942

PRESENTING CLINICAL SIGNS

History: Presenting Complaint: Anemia. Date: 01-03-2022. Notes: Started having seizures in June of 2021 - was seen in Towson - MRI performed - frontal lobe glioma. Owner to University of Minnesota - surgery performed in July. Was on Phenobarbital, Keppra and Prednisone following. Able to be weaned off Prednisone. Currently on: Phenobarbital 64.8 mg - 1.5 tablets by mouth BID Keppra 750 mg XR - 2 tablets by mouth BID. Gets medications at 8am-8pm. Gets MRI's every 4 months - last performed in November - was clear. Owner noted end of December (approx. 2 weeks ago) lethargic and decreased appetite. When going up the stairs starts to breathe heavily and then had episode where all four limbs get stiff and fell over. BW performed 12/20 & Chest X-rays - lateral performed. Restarted prednisone therapy - currently on 20 mg SID (per owner). Assessment: Concern for progressive / worsening anemia. Plan: Admit into hospital - recheck BW - blood transfusion if necessary. Schedule for Bi-cavitary scan.

Current Medications: Currently on Prednisone 20mg SID, Phenobarbital 64.8 mg - 1.5 tablets by mouth BID Keppra 750 mg XR - 2 tablets by mouth BID. Gets medications at 8am-8pm. In-hospital Famotidine and Doxycycline.
Lab Results: 12/20/2021 - PCV 28%. Elevated ALKP 544. Attached separately.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
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 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 (7.82 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 (8.16 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 0.72 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 0.66 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 large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. Visible portions of the biliary tract appear normal. The vena cava appears somewhat prominent and dialted. 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.

Gastrointestinal
The stomach is 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 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.

Other
The vena cava appears prominent in some views of the liver. This can be seen with obstructive disease cranial to the diaphragm, heart disease, etc., or could be normal for this individual.

There is no evidence of significant pericardial effusion on today's scan. Additionally, a brief evaluation of the thorax did not reveal any evidence of pleural effusion, nodules, or obvious mass effects.

PRIMARY FINDINGS

- 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. This could be a hepatopathy secondary to the use of Phenobarbital and Prednisone.

SECONDARY FINDINGS

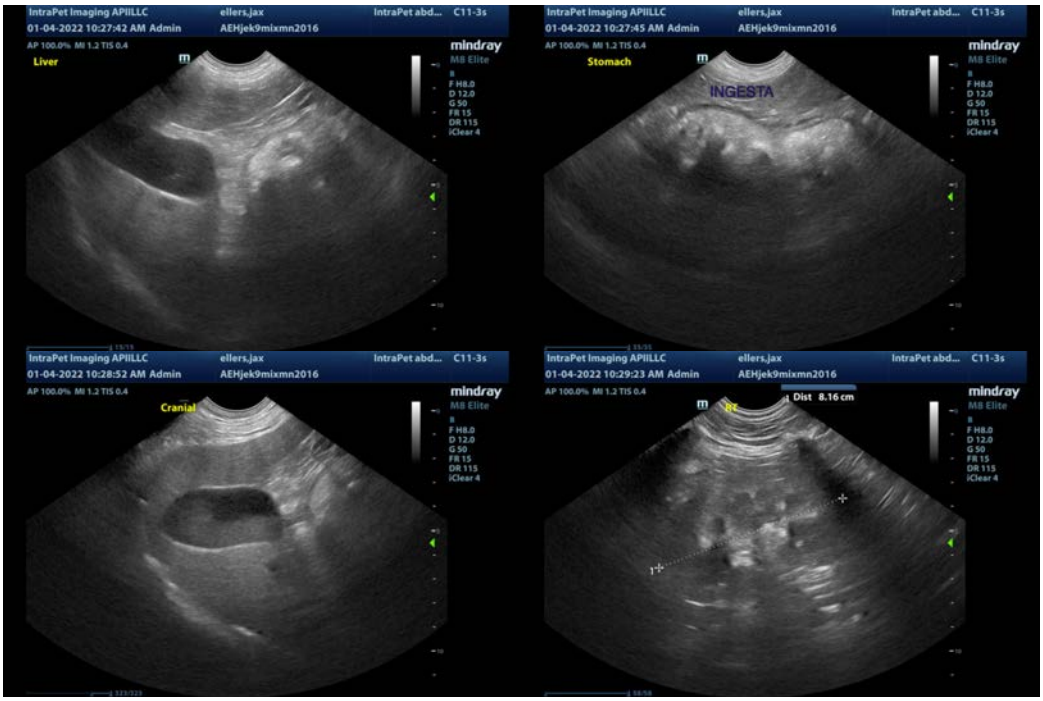
- Mild gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

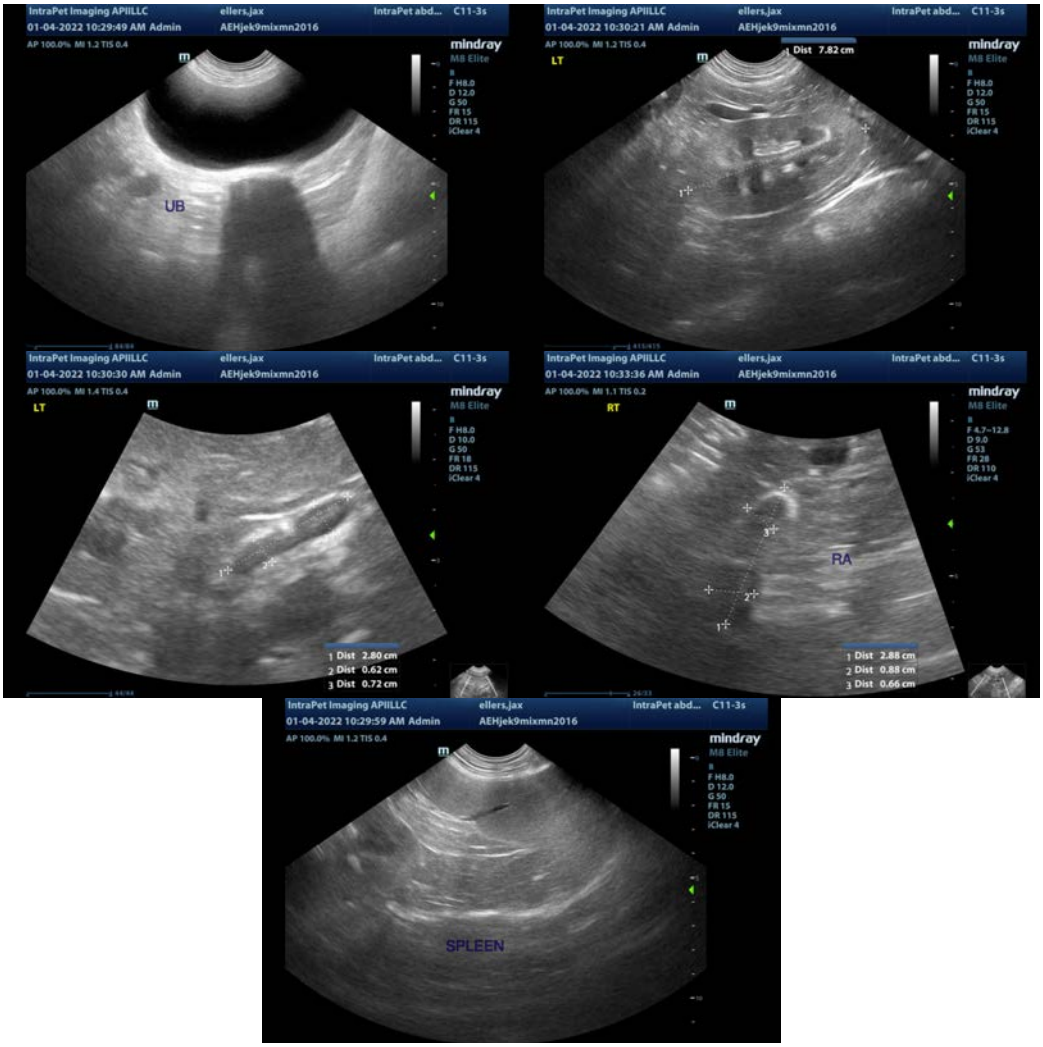
- Moderate ingesta within the gastric lumen – Correlate with feeding history. This likely represents a non-fasted patient.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An obvious lesion responsible for the anemia reported is not visualized. There is no free fluid observed, and no focal mass effects. Recommend a pathologist review of the blood smear for atypical cells, evidence of microcytosis, blood borne parasites, spherocytes, etc. Additionally, look for evidence of pancytopenia, as Phenobarbital can cause cytopenias. If this is truly a non-regenerative anemia with no evidence of hemolysis and no melena, then consider a bone marrow evaluation and vector borne disease testing. Additionally, consider consultation with your veterinary neurologist regarding options for tapering off of Phenobarbital in case it is contributing to the anemia. If not already done, recommend 3-view thoracic radiographs.

The significance of the prominent vena cava is unknown. Consider a cardiac ultrasound and continued monitoring.





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