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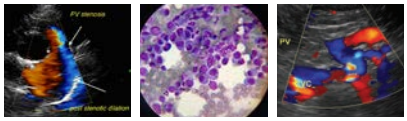

SonoPath

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DATE

12/8/21

PATIENT

Fife Zaruba

SPECIES

Canine

BREED

Chihuahua X

SEX

Neutered Male

AGE

5/17/11

WEIGHT

8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Airpark AH

REFERRING VET

Dr. Mazzochette

INVOICE

33350

PRESENTING CLINICAL SIGNS

History: Hx chronic vomiting x several years (suspected bilious vomiting syndrome, improved with Pepcid). Now vomiting has worsened and increased in frequency (almost daily), varies between digested food and bile. Moderately lethargic, losing weight (has lost 3lb in 1 year). Stools are soft. Possibly polyphagic (appetite has always been ravenous per owner).

Current Medications: Previously was on Pepcid, however just recently started omeprazole 5mg PO SID, given Cerenia injection and SQF on 12/1/21.
Lab Results: 1. mod hemoconcentration (Hct 63.3%, typical for p based on prior trends)--r/o normal variant vs dehydration vs other.
2. lack of stress leukogram however cortisol level is high.
3. persistent hypoglycemia over 1.5 years, now lowest it has ever been despite having just eaten large meal--r/o artifact from hemolysis (unlikely since persistent for the past year, even in samples with less hemolysis), insulinoma, atypical Addison's (ruled out d/t normal cortisol), liver disease
4. ALT 247--r/o hepatopathy, neoplasia, etc.
5. specCPL WNL.
6. 4dx/fec neg, BW otherwise NSF. Attached separately.
Radiographs: Screening whole body rads: NSF except for dilated stomach with food particulates. 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 prostate is normal in size (0.67 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 (3.77 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 (3.64 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 0.55 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 normal in size, and echogenicity 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. 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 minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. There are two suspected focal hypoechoic nodules visualized within the wall of the stomach, one measuring 0.83 cm x 1.04 and the other measuring 1.08 cm x 0.58 cm. The distinction of the gastric wall layers is generally adequate, but is absent in these areas. There is no impression of reduced peristaltic activity.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measured 0.29 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 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
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.

PRIMARY FINDINGS

- Two focal hypoechoic nodules within the gastric wall – Given the history of progressive vomiting and hypoglycemia, a gastric leiomyoma or leiomyosarcoma may be need to be considered. Other differentials are very possible.

- 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.

- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- 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).

SECONDARY FINDINGS

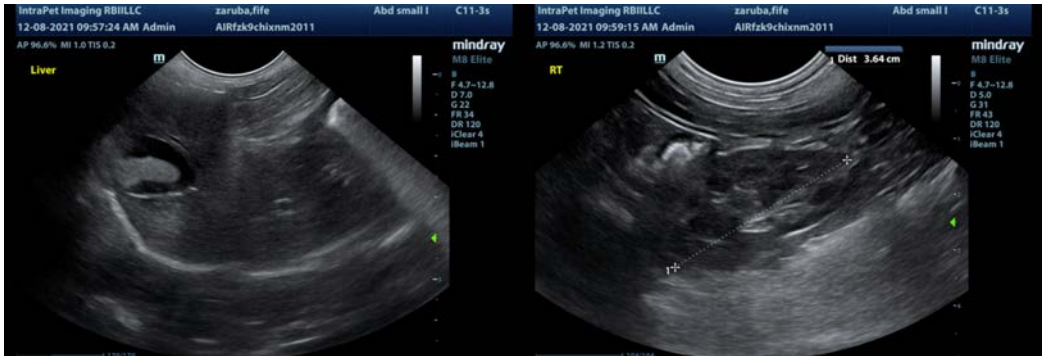
- Mild gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

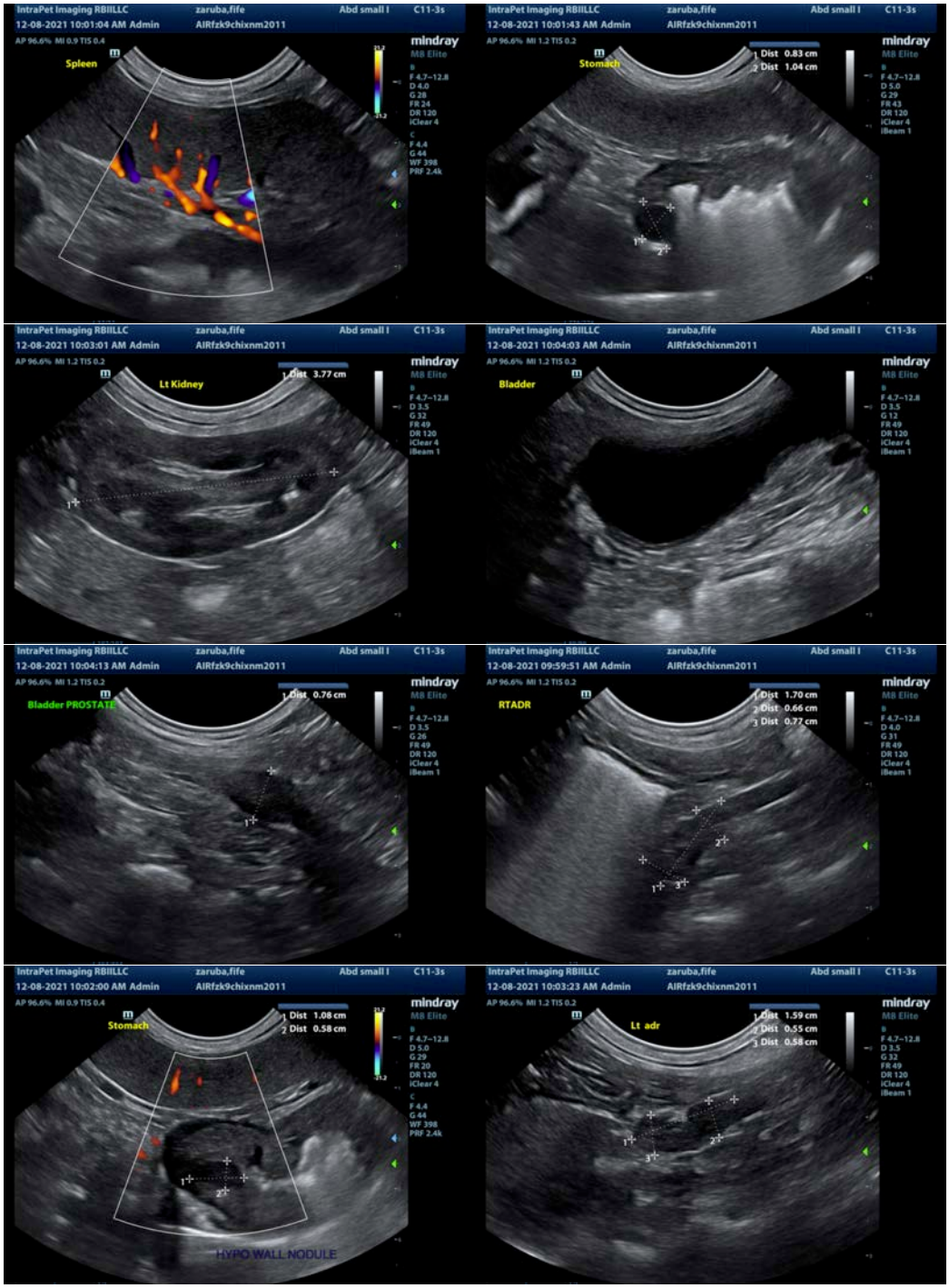
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unfortunately, there are multiple possible causes for the vomiting and weight loss reported. Two suspected gastric lesions were visualized as well as mild small intestinal thickening and a prominent pancreas.

- Recommend a GI panel to Texas A&M for quantitative PLI, TLI, cobalamin and folate to get more information regarding the pancreas and small intestine.
- Consider insulin levels to evaluate the hypoglycemia – This is typically most interpretable with a blood glucose <40, but it might be nice to have a baseline. Make sure it is a fasted insulin level when the blood sugar is low.
- Recommend 3-view thoracic radiographs.
- Recommend a liver function test to further evaluate the ALT and hypoglycemia.
- I would consider surgery to evaluate the gastric masses, obtain GI biopsies, and liver biopsies.
- Recommend referral to a surgeon for these procedures and evaluation of the pancreas at the same time for any possible nodules. Alternately, you could consider a pre-operative CT scan to try to obtain more information.

In dogs, gastric leiomyomas and leiomyosarcomas can be associated with hypoglycemia. Generally, these are large masses, but it can be a paraneoplastic phenomenon and a possible differential for this gastric lesion.

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mindray
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C11-3s
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Stomach
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2 Dist 1.04 cm
mindray
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Lt Kidney
1 Dist 3.77 cm
mindray
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mindray
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Bladder PROSTATE
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RTADR
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2 Dist 0.66 cm
3 Dist 0.77 cm
mindray
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C11-3s
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Stomach
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2 Dist 0.58 cm
HYPO WALL NODULE
mindray
IntraPet Imaging RBIILLC
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3 Dist 0.58 cm
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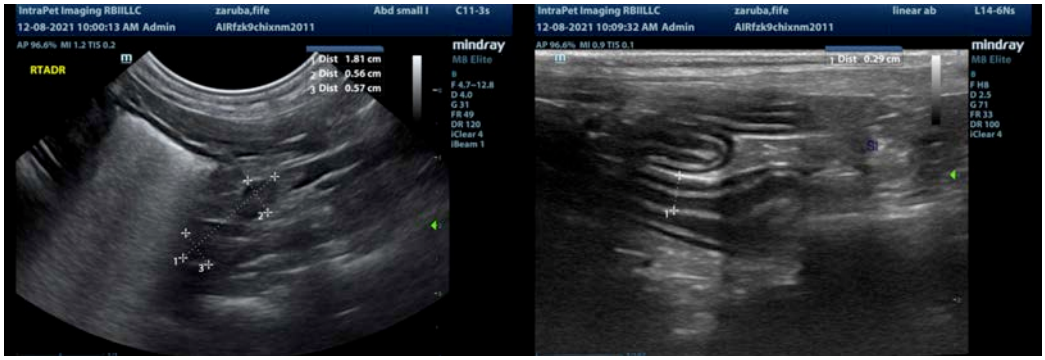

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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