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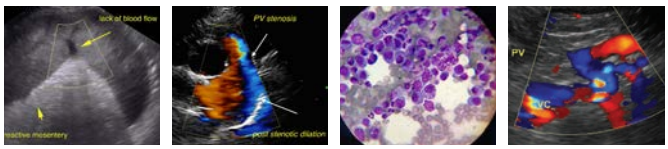

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1-800-838-4268 info@sonopath.com

PATIENT

Daisy Arroyo

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

10.8 Pounds

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Megan Cassels-Conway

HOSPITAL NAME

Central Broward AH

REFERRING VET

Dr. Janeen Lezcano

INVOICE

39463

DATE

7/13/22

PRESENTING CLINICAL SIGNS

P has chronic hx of inappetence and intermittent vomiting. P had responded for many years to a LID. Since the diet has not been available due to backorders p et has been more picky (coincidence?). Few weeks ago p had acute incident of collapse after being walked in the heat for an extended period of time. P was then placed on pimonendan and sildenafil due to possible PH. P is now anorexic and vomiting. P also has a grade 4/6 systolic HM.
Abnormal PE/Chem/CBC/UA Results: 7/13/22: CBC: WNL, Chem: creat: 1.1, UA: pending.

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 left kidney has a normal shape and size (3.02 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.

The right kidney has a normal shape and size (3.74 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.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.39 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 0.42 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 large in size, and normal in echogenicity with I rregular margins. The parenchyma is severely heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. The liver is very mottled with too numerous to count ill-defined, hypoechoic nodules.

The gall bladder lumen is moderately distended. The wall of the gall bladder thickened and slightly irregular, measuring 0.17 cm. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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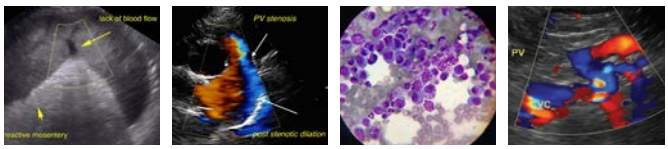

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Gastrointestinal

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. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

Most of 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. Jejunum wall measured 0.32 cm. Visualized peristalsis appears appropriate. There are some areas of small intestine that have mild to moderate fluid distention and some intraluminal shadowing, but no overt obstruction is visualized.

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. There is a cystic prominent gastric lymph node visualized measuring 0.83 cm. The omentum is of normal echogenicity.

PRIMARY FINDINGS

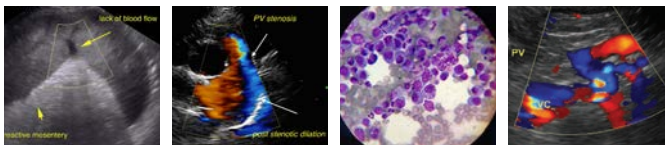
- Large, heterogeneous liver with ill-defined nodules – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The nodules observed trend towards a more benign appearance, but an underlying neoplastic process cannot be ruled out.
- Large gallbladder with a moderate amount of debris and a mildly thickened/prominent gallbladder wall. Findings could be consistent with mild cholecystitis.
- Mild small intestinal fluid dilation with suspected shadowing ingesta – most consistent with mild ileus. Correlate with abdominal radiographs if foreign material is suspected.
- 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

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No large focal lesions are visualized to explain the reduction in appetite and intermittent vomiting reported. The liver is large, irregular and severely heterogeneous/nodular. The significance of this, if there is no liver enzyme elevations, is unknown. A fine needle aspirate of the liver could be considered.



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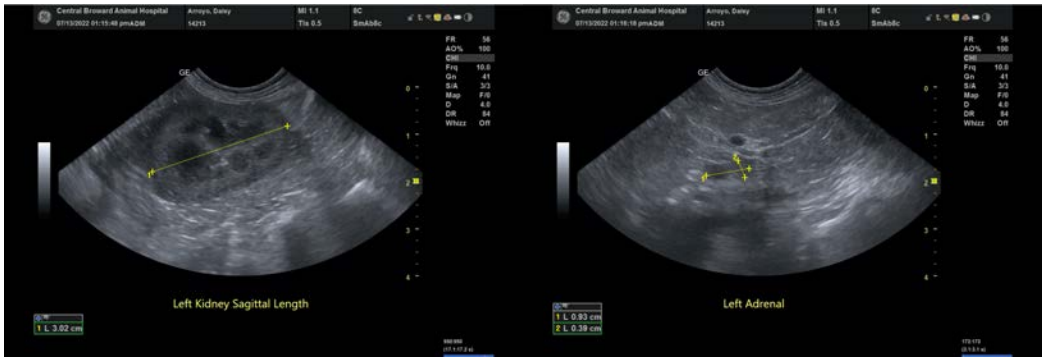
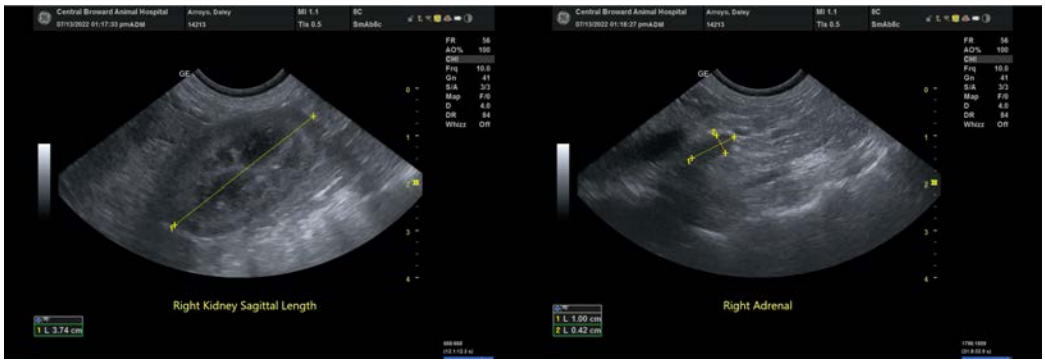
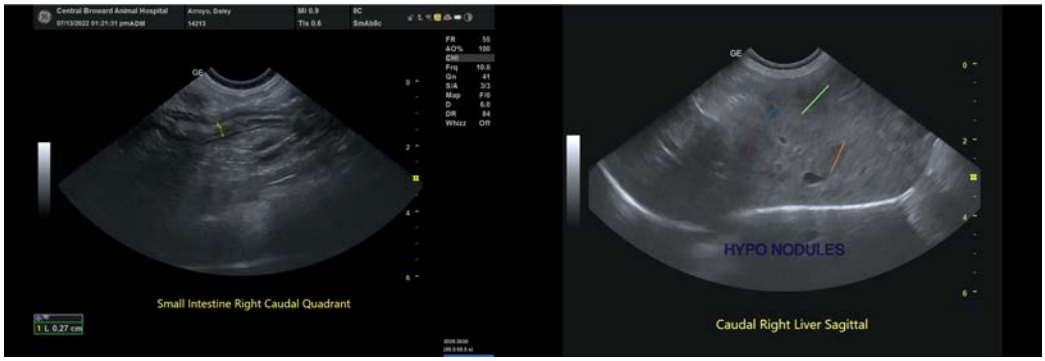
Additionally, the gallbladder wall is slightly thickened and prominent. Again, this typically would be associated with elevated liver values if cholecystitis is present. If this a concern, consider Ursodiol therapy and continued monitoring.

The small intestine largely appears normal, but there are some areas that have mild fluid dilation and some shadowing material most consistent with ingesta. Correlate with feeding history and abdominal radiographs. You could consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to further evaluate the pancreas and small intestine.

Recommend restarting a novel protein/hydrolyzed protein prescription diet. Consider chronic probiotic therapy. Additionally, there could be the possibility that some of the stomach upset is associated with the new medication(?).







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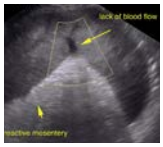
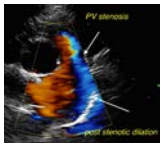
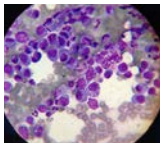
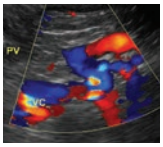

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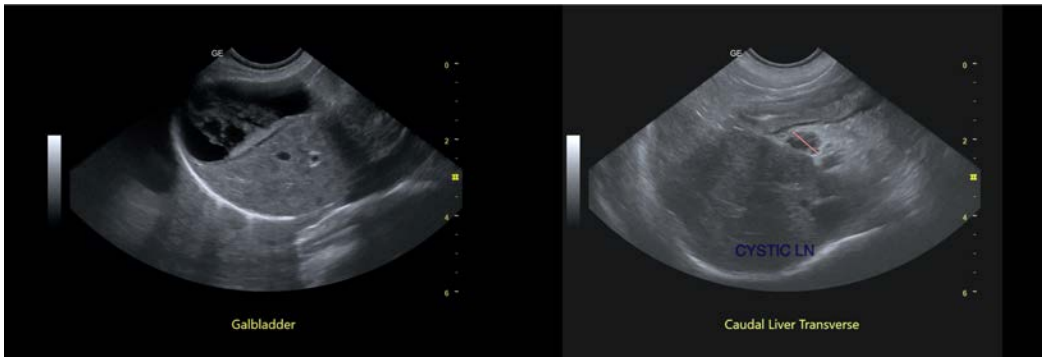

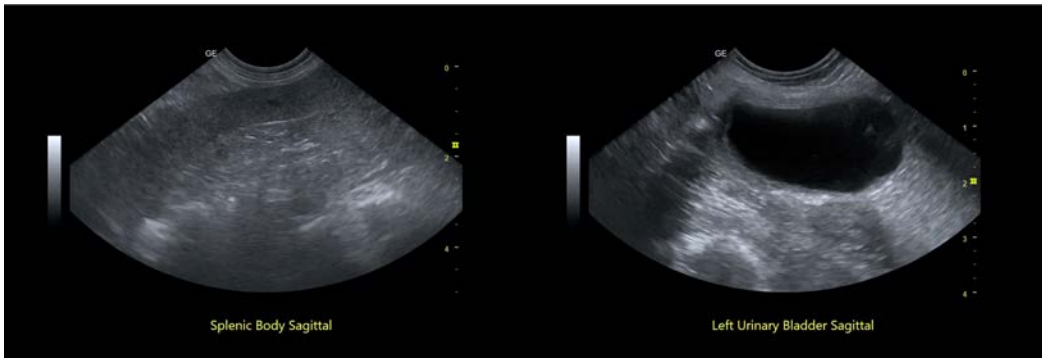

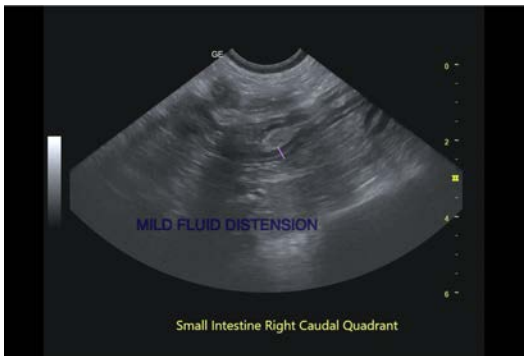

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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