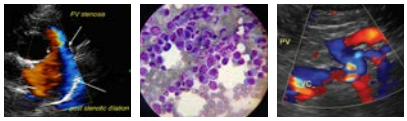
IMAGING PERFORMED BY

IntraPet.com



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DATE

2/21/23

PATIENT

Penny Silverstein

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

12/11/13

WEIGHT

7.18 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Timonium AH

REFERRING VET

Dr. McMichael

INVOICE

45372

PRESENTING CLINICAL SIGNS

Recent GI upset- drooling, hyporexia, increased gas, small amt diarrhea
H/O gall bladder sludge.

Current Medications: Enalapril 5mg 1/4 tab BID, Vetmedin 1.25mg 1 tab PO q 12 hrs, Spironolactone 25mg 1/4 tab SID, Theophylline 25mg 3/4 tab q 12 hrs, Pepcid 10mg 1/4 BID, Ursodiol 50mg 1 sid, Tylosin 50mg 1tab BID, Cerenia 16mg 1/2 SID, Apoquel 3.6mg PRN (1/2 tab SID), Metacam 0.2mL SID orally, Proviable 1 cap SID, Fish oil 0.25mL BID, Lasix 5mg SID, Cytopoint 10mg.
Lab Results: CBC: normal, Chem: normal, Hw4dx -> ALL NEGATIVE, Fecal -> ALL NEGATIVE.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, BS, RDMS.

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 (3.18 cm) with numerous cortical cysts, the largest of which measures at 0.77 cm, and small pinpoint mineralizations. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.56 cm) with numerous cortical cysts, the largest of which measures 0.82 cm, and pinpoint non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.54 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 0.47 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 with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. There are numerous hypoechoic nodules visualized throughout the parenchyma, varying in size from approximately

0.20-0.70 cm. Additionally, there is a cystic lesion visualized on the right side of the liver measuring 0.60 cm x 0.46 cm.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris and some areas have early mucosal stranding and organization of the debris into an early mucocele. There is a large amount of primarily non-organized echogenic debris present as well. There is no evidence of bile duct dilation.

Gastrointestinal

The stomach contains moderate ingesta/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 layers 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 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.

ULTRASONOGRAPHIC FINDINGS

- Decreased corticomedullary distinction in both kidneys with numerous cortical cysts and pinpoint mineralizations – The bilateral renal findings are consistent with age-related change.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Hyperechoic liver with hypoechoic nodules – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy. The significance of the hypoechoic nodules is unclear. The appearance trends towards more benign etiology.
- Early gallbladder mucocele – The gall bladder changes are most consistent with a developing mucocele. Consider medical management and close monitoring for progression of this lesion.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A single definitive cause for the symptoms described is not identified on today's scan, although there are some changes observed that could be significant.

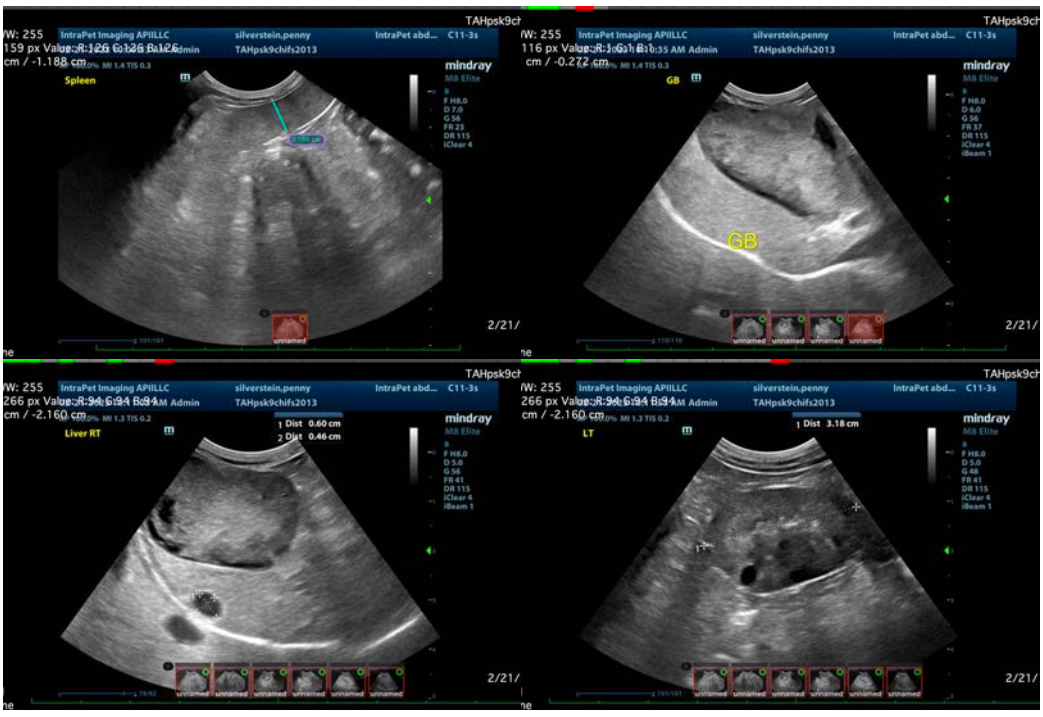
The pancreas is somewhat prominent and mottled. This could be consistent with previous episodes of pancreatitis or current mild pancreatitis. Correlate these findings with a quantitative PLI and consider treatment for pancreatitis.

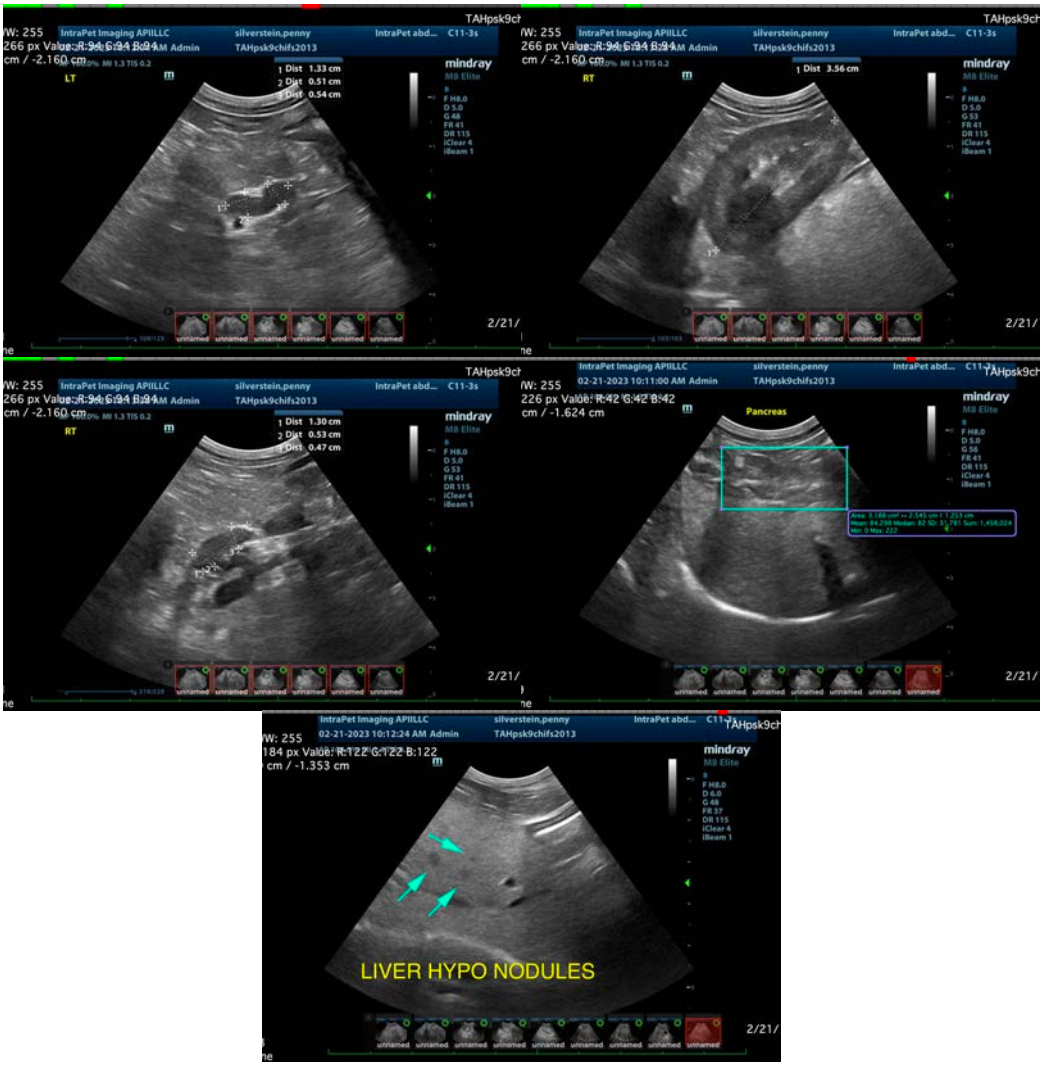
Additionally, there is a large amount of debris in the gallbladder, which is starting to organize into a mucocele. The gallbladder wall does not appear severely thickened, and there is no obvious inflammation surrounding the gallbladder, so the significance of this lesion related to the symptoms is unclear at this time, but close continued monitoring is warranted, as this could easily develop into a surgical lesion. Recommend continued Ursodiol therapy and monitoring of liver values.

The changes observed in both kidneys are significant, but likely chronic and age related. I suspect this is not associated with the symptoms described, as lab work is reported to be normal.

Additionally, consider the possibility of primary gastrointestinal disease, as this can be present with minimal ultrasonographic changes.

- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Recommend thoracic radiographs to evaluate the esophagus and the thoracic cavity.
- Recommend chronic probiotic therapy.
- If symptoms persist and underlying gastrointestinal disease is strongly suspected, you could consider obtaining GI biopsies.





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