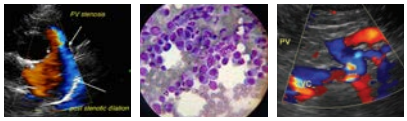
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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

DATE

5/11/23

PATIENT

Sophie Camen

SPECIES

Canine

BREED

Shetland Sheepdog

SEX

Spayed Female

AGE

9/15/07

WEIGHT

18.4 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Everhart Vet Hospital

REFERRING VET

Dr. Baumler

INVOICE

47293

PRESENTING CLINICAL SIGNS

P has new heart murmur grade 3/6 PMI right sided on latest visit 4/26/23 that was never previously appreciated. No arrhythmias noted, pulses strong and synchronous. P also has new history of night time soft coughing every night and when she gets up in the AM after laying down all night. No exercise intolerance or lethargy, otherwise doing really well. 3view thoracic rads 4/26 showed mild old age changes to lungs, no obvious heart enlargement, no pulmonary edema. Other pertinent medical history: hx gall bladder sludge/incr liver enzymes managed with ursodiol, hx mild seasonal allergies treated w/ cytopoint q6-8wk, hx pancreatitis bouts. P present to EVH on 05/06/2023 for ADR, vomiting and diarrhea since 05/04/2023. No blood noted in either vomit or stool samples. Decreased interest in food and water at home as well. Patient was tense on cranial abdominal palpation and slightly dehydrated.

Current Medications: Cytopoint q6-8wk SQ, Ursodiol 250mg 1/2 tab SID PO daily; been on for about 6months, Pepcid 10mg BID PO PRN, METRONIDAZOLE TINY TAB 50MG 5/6/2023
FORTIFLORA CANINE BOX 5/6/2023, Cerenia 16mg tablet 5/6/2023, Cerenia Injection 10mg/mL 5/6/2023
Lab Results: Largely WNL.
Radiographs: Brief ultrasound reveals considerable sludge noted in gall bladder, with concern for spiculated appearance around outer edge that is suspicious of development for mucocele. Hyperechoic region of pancreas.
Date of Previous IntraPet Ultrasound: 8/29/22. See attached.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Requested by DVM.
Imaging Performed By: Andi Parkinson, 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 (3.69 cm) with numerous shadowing, non-obstructive nephroliths. Overall echogenicity is normal with adequate 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 (4.48 cm) with numerous shadowing, non-obstructive nephroliths. Overall echogenicity is normal with adequate 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 0.67 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 0.53 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 and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal.

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. There are numerous ill-defined hypoechoic nodules within the coarse hepatic parenchyma. A peripheral nodule visualized measures 1.58 cm x 1.21 cm. A more central lesion measures at 0.70 cm.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris and there is organization and stranding of this debris into a mucocele. There is minimal surrounding inflammation and no obvious free fluid observed. The bile duct is normal/not visible. Findings are consistent with a mucocele. Consider close monitoring and initial medical management.

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.

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 measures 0.32 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 area of 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.

PRIMARY FINDINGS

- Shadowing mineralization/non-obstructive nephroliths in both kidneys – Hyperechoic foci are visualized in the kidney most consistent with nephroliths. There is no current evidence of obstructive disease. Correlate findings with abdominal radiographs, urinalysis, and culture. Continued monitoring is warranted for progression/obstruction.

- Large, heterogeneous liver with ill-defined hypoechoic 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

toward a more benign process but underlying neoplasia cannot be ruled out.

- Gallbladder mucocele – There is a mucocele present with a large amount of accumulated solid debris and peripheral stranding. No overt wall thickening or inflammation is visualized.

SECDONDARY FINDINGS

- Hyperechoic foci visualized in the spleen – Findings are most consistent with benign myelolipomas. Recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

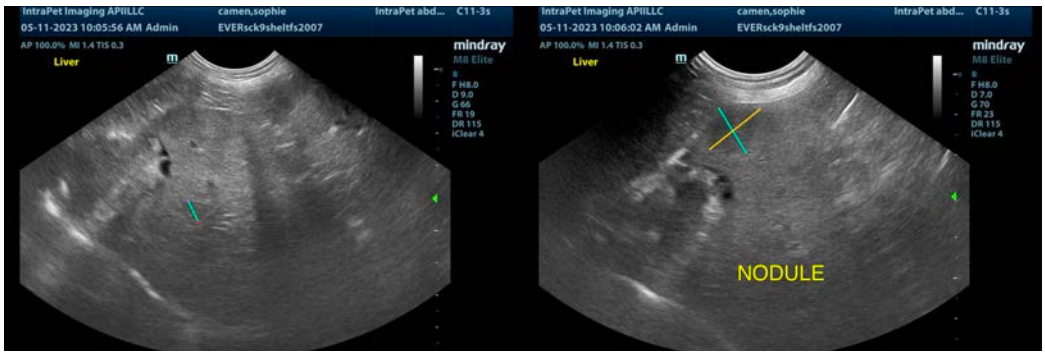
The gallbladder is visibly stable in appearance from theh previous scan with no wall thickening or surrounding inflammation noted. Nonetheless, this is a mucocele, and it has not improved with medical therapy. It is unknown if this is the source of the GI signs reported, as liver enzyme elevations are not present.

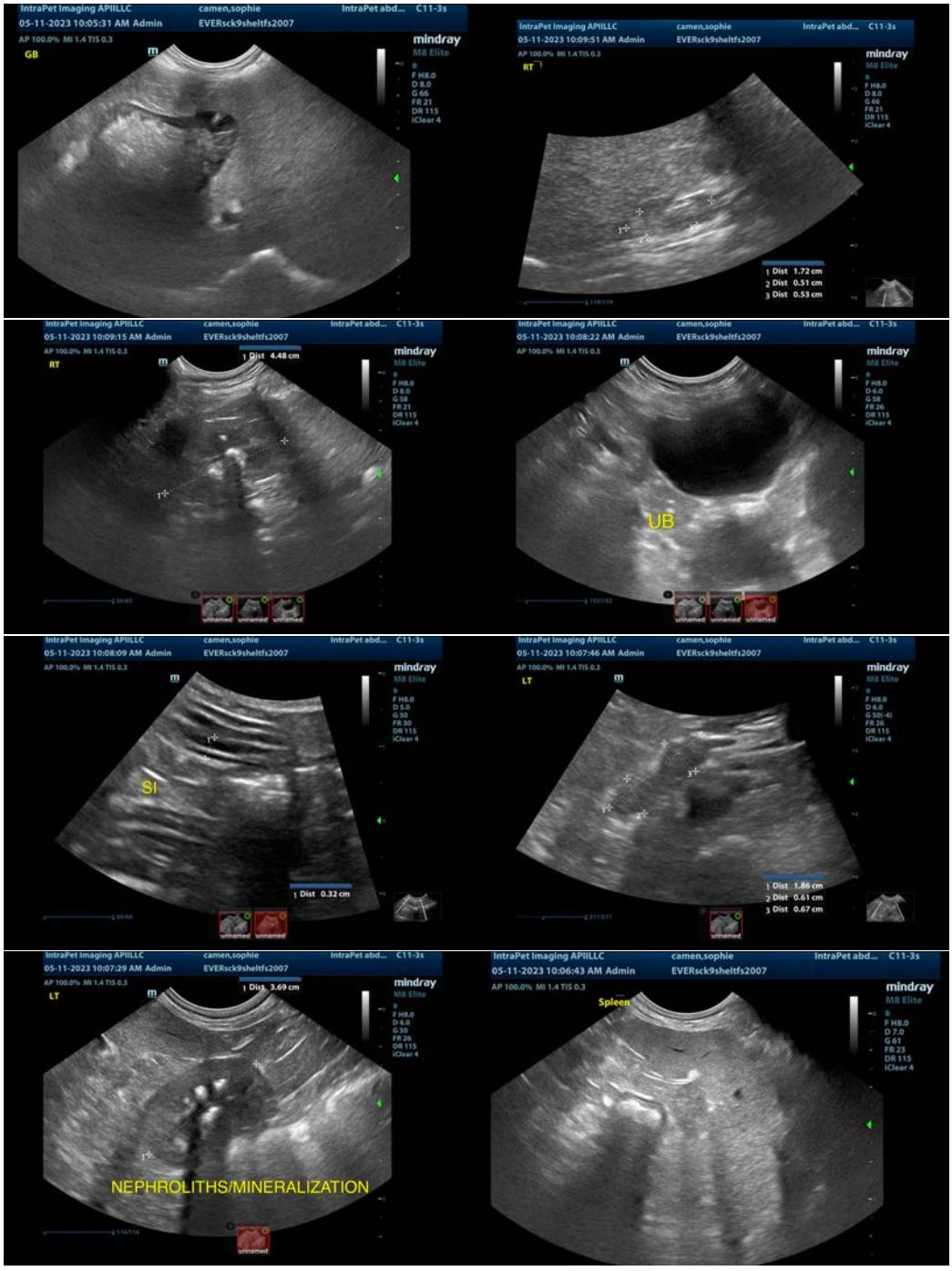
The area of the pancreas appears relatively normal, making severe pancreatitis much less likely, and no focal bowel lesions are observed, but there can be underlying gastrointestinal disease without significant ultrasonographic findings. Consider further evaluation for gastrointestinal disease with a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate.

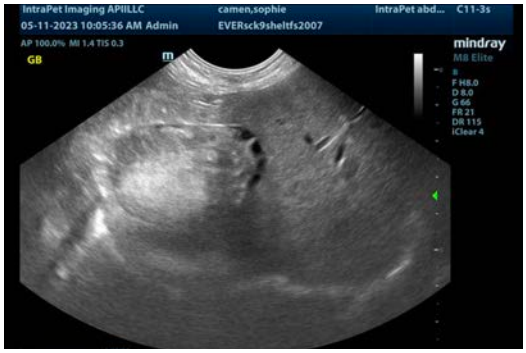
There are numerous options moving forward. A more aggressive approach could include removing the gallbladder and biopsies of the GI tract +/- pancreas. A more conservative route could include medical treatment for cholecystitis by continuing Ursodiol and a course of antibiotics (with concurrent use of probiotics administered at least 2 hours apart), and close continued monitoring. Additionally, you could consider a novel protein/hydrolyzed protein prescription diet in the case of dietary sensitivity. If abdominal pain or liver enzyme elevations spike, the gallbladder should be reevaluated on an emergency basis to evaluate for the need of possible removal.

There are hypoechoic nodules visualized in the liver. The previously noted nodule appears relatively stable, but numerous nodules are visualized. The appearance of these trends towards a more benign lesion. If there is concern, a fine needle aspirate could be considered.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.




IntraPet Imaging APIILLC
camen,sophie
IntraPet abd... C11-3s
05-11-2023 10:05:31 AM Admin
EVERsck9sheltfs2007
GB
mindray
M8 Elite
IntraPet Imaging APIILLC
camen,sophie
IntraPet abd... C11-3s
05-11-2023 10:09:51 AM Admin
EVERsck9sheltfs2007
RT
1 Dist 1.72 cm
2 Dist 0.51 cm
3 Dist 0.53 cm
IntraPet Imaging APIILLC
camen,sophie
IntraPet abd... C11-3s
05-11-2023 10:09:15 AM Admin
EVERsck9sheltfs2007
RT
1 Dist 4.48 cm
IntraPet Imaging APIILLC
camen,sophie
IntraPet abd... C11-3s
05-11-2023 10:08:22 AM Admin
EVERsck9sheltfs2007
UB
IntraPet Imaging APIILLC
camen,sophie
IntraPet abd... C11-3s
05-11-2023 10:08:09 AM Admin
EVERsck9sheltfs2007
SI
1 Dist 0.32 cm
IntraPet Imaging APIILLC
camen,sophie
IntraPet abd... C11-3s
05-11-2023 10:07:46 AM Admin
EVERsck9sheltfs2007
LT
1 Dist 1.86 cm
2 Dist 0.61 cm
3 Dist 0.67 cm
IntraPet Imaging APIILLC
camen,sophie
IntraPet abd... C11-3s
05-11-2023 10:07:29 AM Admin
EVERsck9sheltfs2007
LT
1 Dist 3.69 cm
NEPHROLITHS/MINERALIZATION
IntraPet Imaging APIILLC
camen,sophie
IntraPet abd... C11-3s
05-11-2023 10:06:43 AM Admin
EVERsck9sheltfs2007
Spleen



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