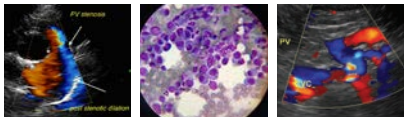
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

DATE

7/14/22

PATIENT

Ziggy Clear

SPECIES

Canine

BREED

Pit Bull X

SEX

Neutered Male

AGE

4/23/10

WEIGHT

49 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Andi Parkinson RDMS

HOSPITAL NAME

Everhart Vet Hospital

REFERRING VET

Dr. Hays

INVOICE

39526

PRESENTING CLINICAL SIGNS

Patient presented in early May for vomiting, dx with GI FB (carpet). Pre-op labs showed elevated ALP (498) and ALT (405). FB sx completed without complication, liver biopsy showed copper storage hepatopathy. Follow up testing showed copper at 2570ppm dry wt. Pt has not started D-Penicillamine. Re-presented on 7/12 for few episodes vomiting and lethargy. Labs show further elevation of ALP (890) and ALT (581). Patient has been hospitalized on IVF, cerenia, buprenex, metronidazole.

Current Medications: Cerenia 1mg/kg IV SID- started 7/12, Metronidazole 15mg/kg BID- started 7/13, LRS at 2x maint- started 7/12
Radiographs: Thorax NSF.
Date of Previous IntraPet Ultrasound: No previous.
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 (6.34 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 (6.49 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 0.59 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 0.73 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 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 gallbladder lumen is significantly distended. The gallbladder wall appears diffusely thickened, hypoechoic and irregular, with adherent debris. The gallbladder measures at 0.97 cm, and in many areas is surrounded by hyperechoic mesentery and a scant amount of anechoic free fluid. Findings are most consistent with severe cholecystitis and focal peritonitis (sterile or infectious) due to impending rupture or current rupture of the gallbladder. There is no evidence of bile duct dilation.

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. 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

There is a scant amount of free abdominal fluid around the gallbladder. No lymphadenopathy noted. The omentum is of increased echogenicity around the gallbladder.

ULTRASONOGRAPHIC FINDINGS

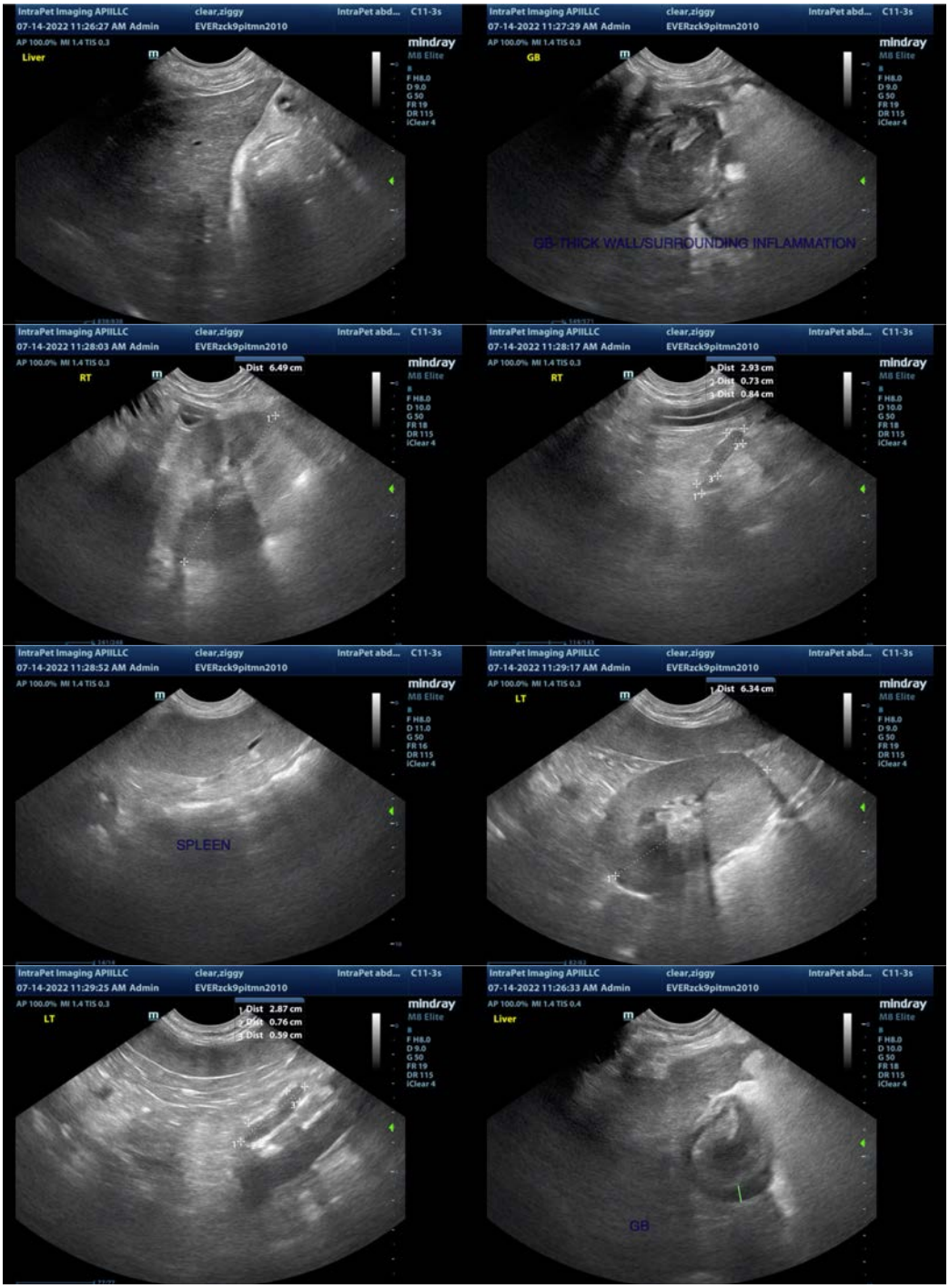
- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

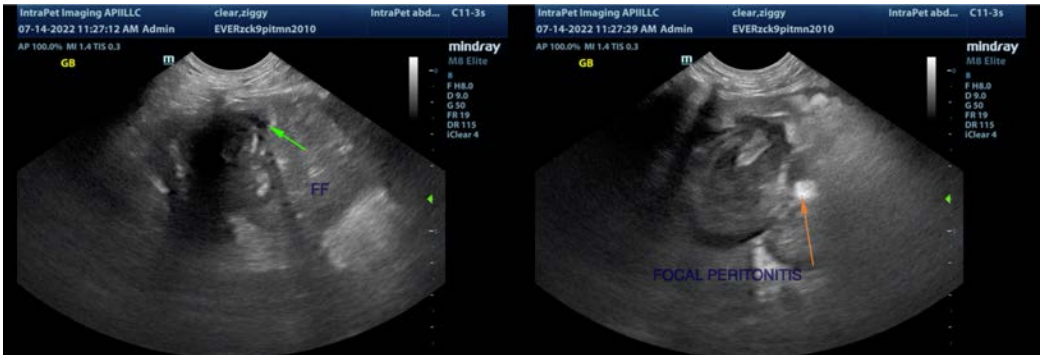
- Large distended gallbladder with thickened wall and surrounding focal peritonitis – most consistent with severe cholecystitis and an impending or recent gallbladder rupture.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver is heterogeneous and abnormal. This is likely consistent with the copper storage disease diagnosed by previous biopsy. Unfortunately, the gallbladder appears very abnormal and diseased with a thickened wall and distention with a large amount of intraluminal debris. Additionally, there is a small amount of surrounding free fluid and hyperechoic mesentery, consistent with focal peritonitis (sterile or infectious). Optimal and definitive treatment would involve surgical removal of the gallbladder on an emergency basis. Medical management with broad-spectrum antibiotics, pain medications, etc. can be attempted, but the prognosis is extremely guarded, and recurrence would be likely.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.


IntraPet Imaging APIILLC
clear,ziggy
IntraPet abd...
C11-3s
07-14-2022 11:26:27 AM Admin
EVERzck9pitmn2010
Liver
mindray
M8 Elite
07-14-2022 11:27:29 AM Admin
GB
GB THICK WALL/SURROUNDING INFLAMMATION
07-14-2022 11:28:03 AM Admin
RT
Dist 6.49 cm
07-14-2022 11:28:17 AM Admin
RT
Dist 2.93 cm
Dist 0.73 cm
Dist 0.84 cm
07-14-2022 11:28:52 AM Admin
SPLEEN
07-14-2022 11:29:17 AM Admin
LT
Dist 6.34 cm
07-14-2022 11:29:25 AM Admin
LT
Dist 2.87 cm
Dist 0.76 cm
Dist 0.59 cm
07-14-2022 11:26:33 AM Admin
Liver
GB



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