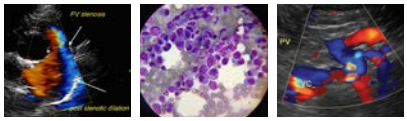
IMAGING PERFORMED BY

IntraPet.com



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

DATE

4/13/23

PATIENT

Pearl Wilson

SPECIES

Feline

BREED

DMH

SEX

Spayed Female

AGE

10/20/15

WEIGHT

13.6 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Saubier

INVOICE

46649

PRESENTING CLINICAL SIGNS

rDVM BW 4/4 ALT 111 ALKP 316 GGT 6 T-Bili 13.7 Amylase 1887 BW 4/11 BG 240 ALT 188 ALKP 270 GGT 23 T-BILI 15.1 Amylase >2500 K 2.5. Date: 04-11-2023 Notes: History of being finicky eater and overweight. Approx. 3 months ago - owner switched diet to only wet food from dry food. Approx. 1 month ago - was concerned about her eating - started trying multiple types of wet food Did seem to like Friskies – gravy or pate. Then approx. 10-14 days ago owner noted not even eating treats. No vomiting No known toxic or foreign ingestions. Indoors only seen rDVM 4/4 - BW severe elevations in liver values ALT 111 ALKP 316 GGT 6 T-Bili 13.7 Amylase 1887 X-ray - single view - enlarged liver. Recommend ER - owner elected outpatient therapy Also declined SQ fluids. Dispensed a/d and Elura Owner has been trying to syringe feed for the past week. Pearl had episode of vocalizing and fell to side after feedings. 4/6 Dispensed Denamarin, Amoxicillin and metronidazole. Recheck today - liver values have worsened BW 4/11 BG 240 ALT 188 ALKP 270 GGT 23 T-BILI 15.1 Amylase >2500 K 2.5.

Current Medications: Ampicillin, Buprenorphine, Denamarin, Metronidazole, RC Recovery liquid, Cerenia, Protonix.
Lab Results: See attached.
Radiographs: Only taken to confirm good placement of NG tube.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, 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 (3.88 cm). 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, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.05 cm). 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, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.50 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 0.65 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 (0.98 cm), 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 moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal
The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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 0.13-0.38cm in wall thickness) and the jejunum measured as normal (between 0.15-0.36cm.) 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 hypoechoic as 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. Prominent pancreatic duct noted.

Free Abdomen
There is a small to moderate amount of free abdominal fluid. No lymphadenopathy. The omentum is generally mildly hyperechoic.

Other
Pleural effusion is visualized on both sides of the thorax. Ringdown artifact is visualized at the level of the diaphragm.

The right auricle and pericardium were visualized and were unremarkable. No obvious pathology is visualized. If cardiac function evaluation is desired a full echocardiogram is warranted.

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.

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

- Free abdominal and pleural effusion
- Ringdown artifact at the level of the diaphragm – This can be seen with pulmonary parenchymal disease. Recommend 3-view thoracic radiographs.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver is large and heterogeneous. No focal lesions are visualized and no significant evidence of biliary disease is visualized. Findings are most consistent with a primary hepatopathy. Consider the following:

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc.
- Recommend thyroid evaluation (if not already done)
- Recommend testing for toxoplasmosis.
- If not already done consider pre and post prandial bile acids to evaluate liver function
- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- Consider liver biopsy with samples obtained for histopathology and culture

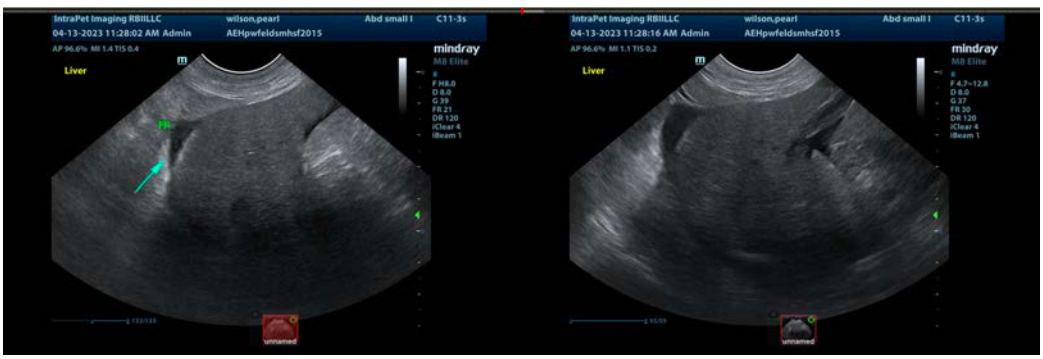
The pancreas is prominent and hypoechoic. This could be consistent with current mild inflammation or previous episodes of inflammation. Correlate these findings with a quantitative fPLI level.

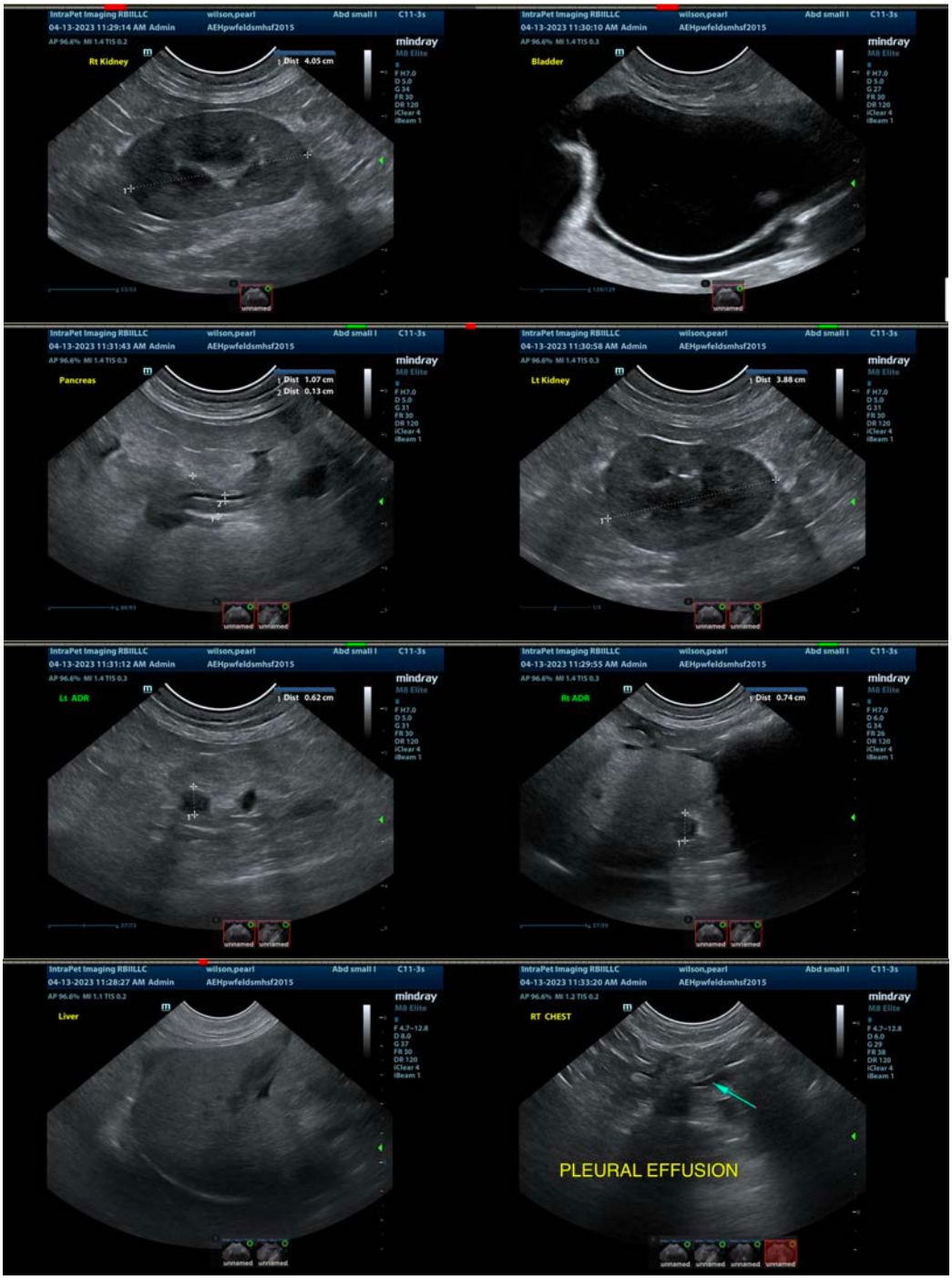
Consider evaluation of the abdominal fluid +/- pleural effusion for fluid analysis and cytology.

Consider full cardiac evaluation due to the pleural and abdominal effusion reported.

If a cytological evaluation of the liver and abdominal effusion does not reveal a diagnosis, consider efforts to stabilize and obtaining a liver biopsy.

Lab work provided demonstrates hyperglycemia. Correlate this with a urinalysis, looking for evidence of a newly diagnosed diabetic and the possible need for insulin administration. Additionally, there is a significantly elevated bilirubin with mild liver enzyme elevations. Correlate this with the possibility of hemolysis, as there is a concurrent anemia present. Consider a pathologist review of the CBC.

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Rt Kidney
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C11-3s
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mindray
RT CHEST
PLEURAL EFFUSION

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.

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