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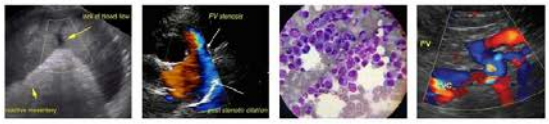

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Mishka Strake

SPECIES

Feline

BREED

DSH

SEX

Intact Male

AGE

5 Years

WEIGHT

7 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

Fairgrounds AH

REFERRING VET

Dr. Kreb

INVOICE

45951

DATE

3/16/23

PRESENTING CLINICAL SIGNS

Not sedated, painful when applying pressure to distended abdomen- cat was fed just prior to AUS- PT presented for an exam with RW of vomiting intermittently and weight loss. At initial exam on 1 MAR 23, PT was icteric with BCS 4/5, distended abdomen and tremendously deranged liver parameters, including markedly elevated T Bili PT presented on 6 MAR for hospitalization, IVF, etc for the day and send home i/d canned food and clavamox drops; icteric, ascites, really minimal change from PE 5 days prior. PT presented on 15 MAR 23 for recheck blood work - see comparison values below - ALP is improved, but T Bili and ALT are even higher; ascites and icterus persist. O reports that the cat is more energetic at home and eating more. R/O EBHO/triaditis vs cholydochocystolithiasis, infectious/inflammatory cholangitis/hepatitis, pancreatitis, other Globulin Ratio 0.6 0.6 ALT 1,418 (12 - 130) U/L 1,136 ALP 417 (14 - 111) U/L 1,195 GGT 41 (0 - 4) U/L a 25 Bilirubin - Total 26.1 (0.0 - 0.9) mg/dL 13.7 Cholesterol 244 (65 - 225) mg/dL 158 Amylase 866 (500 - 1,500) U/L Lipase 4,756 (100 - 1,400) U/L

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 (4.23 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 (4.36 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 0.52 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 0.51 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 large (1.49 cm in width at the level of the hilus). The spleen echotexture is heterogenous and mottled, 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.

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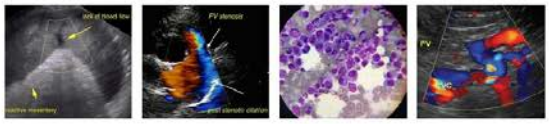

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Liver

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. Intrahepatic bile ducts appear dilated with intraluminal debris.

The gallbladder lumen is significantly distended with a large amount of intraluminal material. The wall of the gall bladder is thickened, measuring up to 0.40 cm in width. There are numerous dilated intrahepatic bile ducts with a large amount of debris, as well as severely distended, thickened, tortuous cystic and common bile ducts, measuring up to 1.5 cm in diameter, and large amounts of intraluminal debris. No obvious point of obstruction is visualized, but the duodenal papilla is not clearly observed.

Gastrointestinal

The stomach contains a moderate to large amount of fluid/ingesta. 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 moderate to severe diffuse fluid dilation. 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. This patient was not fasted, and there is severe diffuse distention of the stomach and small bowel.

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

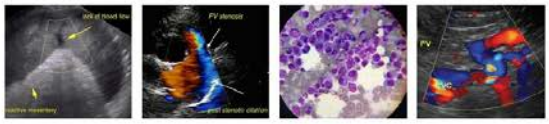
The pancreas is prominent and severely mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is mild mesenteric inflammation surrounding the pancreas.

Free Abdomen

There is a small amount of free fluid. No significant lymphadenopathy. The omentum is hyperechoic in the cranial abdomen.

ULTRASONOGRAPHIC FINDINGS

- Large, mottled spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Prominent, large, mottled pancreas with prominent pancreatic duct – Changes are most consistent with mild pancreatic inflammation, likely with remodeling. Infiltrative disease could also be a differential.
- Severely distended and thickened gallbladder with severely dilated and thickened intra- and extrahepatic bile ducts - Differentials include severe cholangiohepatitis, a distal biliary



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obstruction, or biliary neoplasia. A focal point of obstruction is not visualized.

- 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.
- Severely fluid/ingesta dilated stomach and small bowel – This patient is non-fasted, but the degree of bowel dilation appears excessive.
- Small amount of free abdominal fluid

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

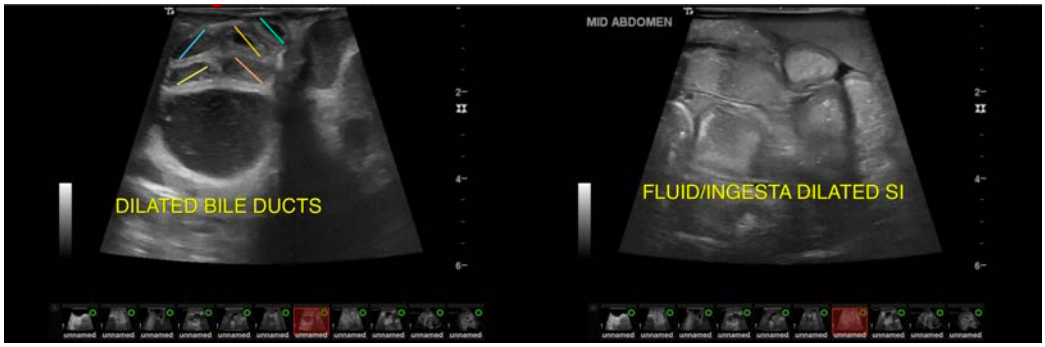
The gallbladder, intra- and extrahepatic bile ducts are all severely dilated with thickened walls and a large amount of intraluminal debris. These findings could be consistent with severe cholangiohepatitis (infectious, inflammatory), biliary neoplasia, or most likely, a distal biliary obstruction. An obstruction is not visualized on today's exam, but clear visualization is challenging due to the severe duct dilation and the extreme dilation of the small intestine with chyme.

The severe dilation of the GI tract with chyme is post prandial but there is concern about a possible hypomotility issue due to the degree of dilation observed.

I am concerned about the possibility of a distal biliary obstruction in this patient. It is likely that surgical exploration or advanced imaging will be needed. In the meantime you could consider Ursodiol therapy and continued treatment for cholangiohepatitis. A fine needle aspirate of the large spleen and the pancreas, as the possibility of underlying neoplasia is a concern. I

Recommend advanced imaging (contrast CT scan) and/or referral to a veterinary surgeon for exploration, sampling (liver, bile, pancreas, bowel), possibly flushing the bile ducts and biliary rerouting if indicated.

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



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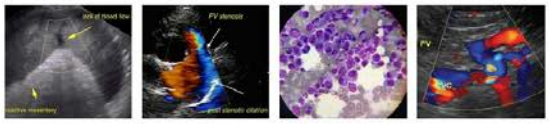

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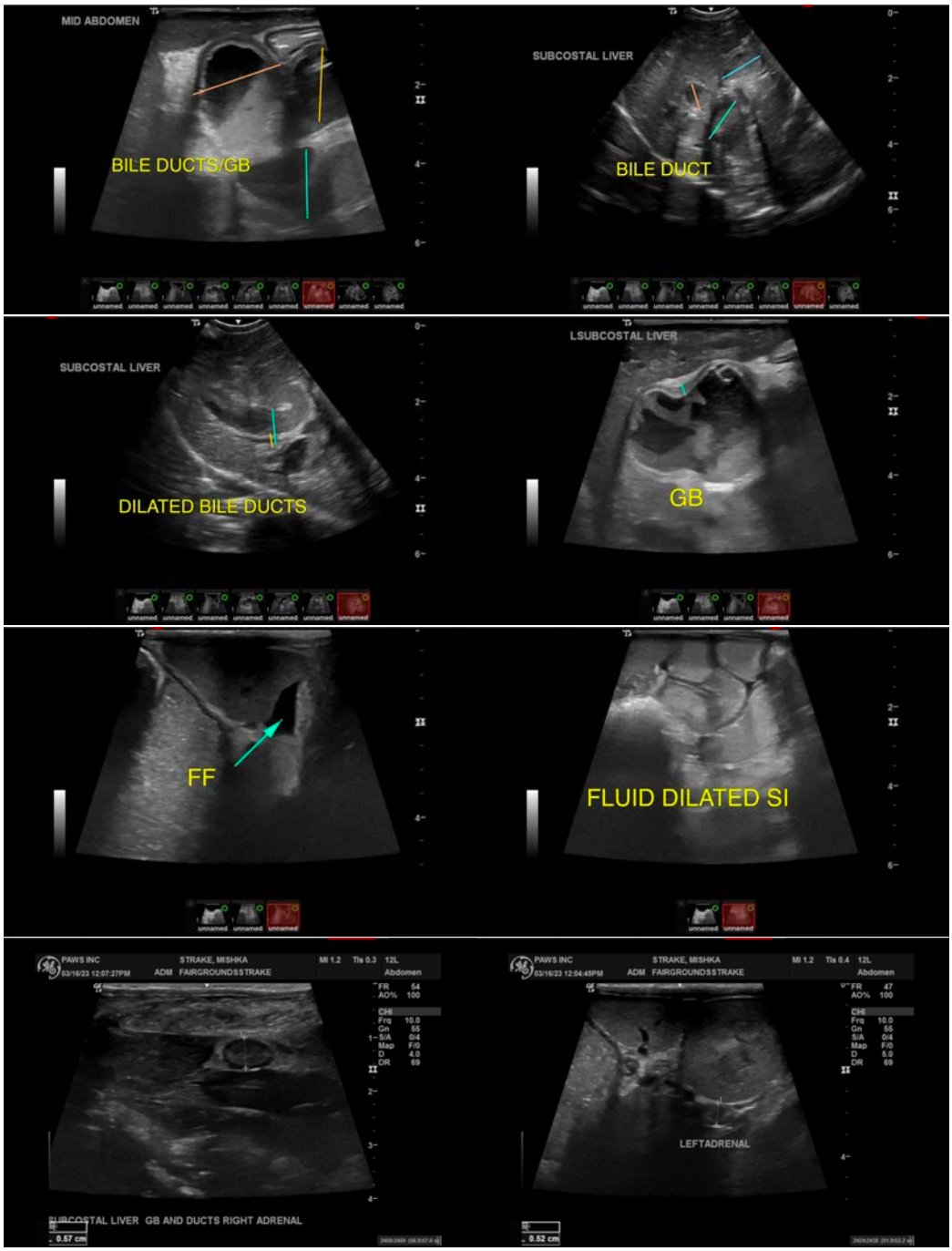

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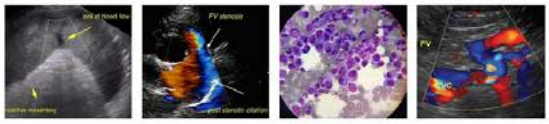

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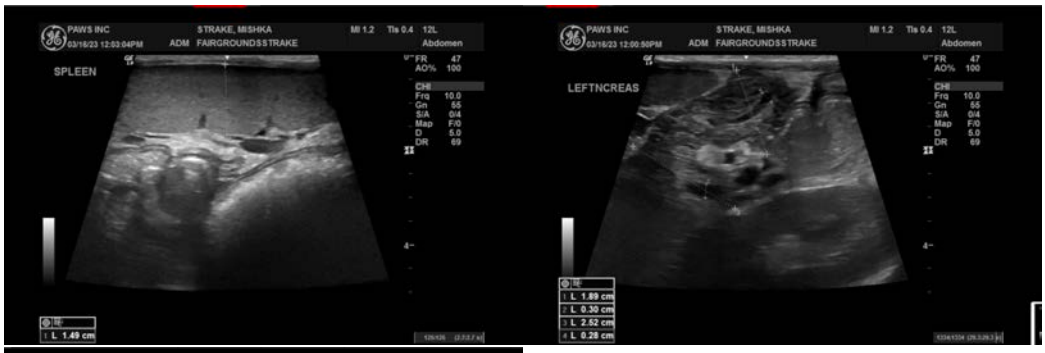

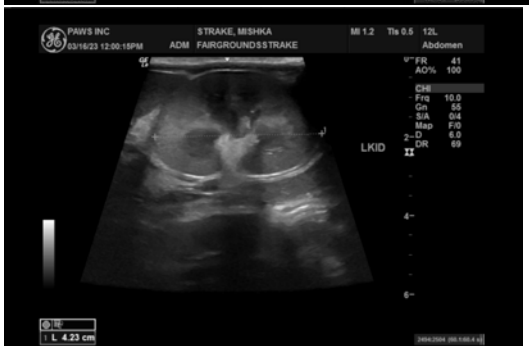

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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